THE ARCHITECT & BUILDING NEWS

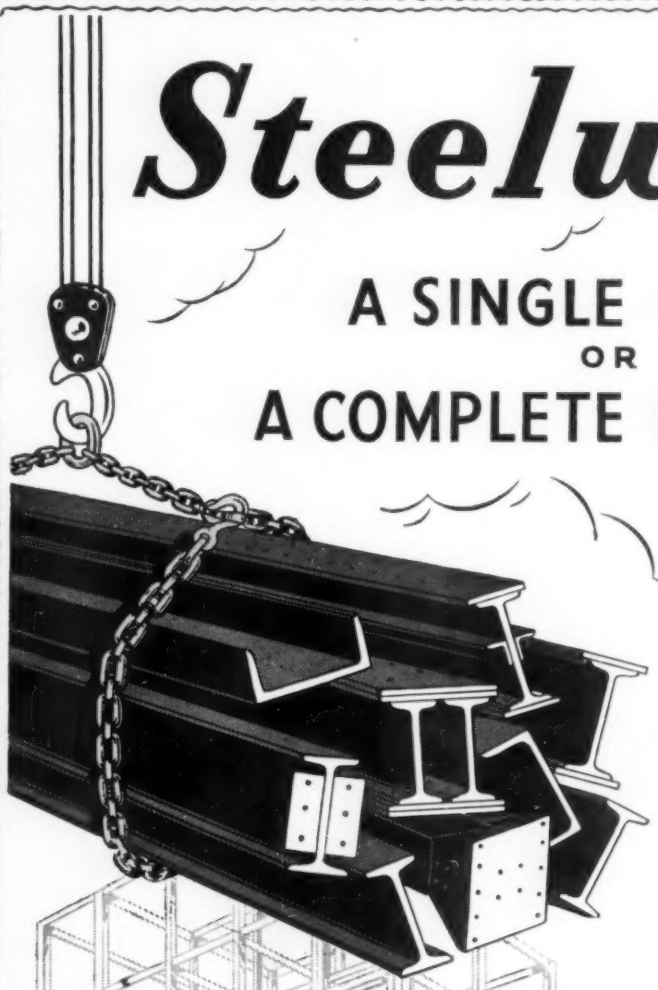
23 AUGUST 1956 · VOL 210 · NO. 8 · ONE SHILLING WEEKLY

- **INSTITUTE OF PATHOLOGY, NEWCASTLE**
- **CONTRACTORS' PLANT IV**

PUBLISHED IN LONDON SINCE 1854

Steelwork

A SINGLE JOIST
OR
A COMPLETE BUILDING



Dry

D&R

STEELWORK
SERVICE

DUNLOP
AND
RANKEN
LTD
LEEDS

TELEPHONE 27301 (20 Lines) ... TELEGRAMS "SECTIONS LEEDS"

THE 600 GROUP OF COMPANIES

"EVERITE" Rainwater Goods to which "TURNALL" "Colourglaze" finish has been bonded possess an attractive colourful surface which cannot fade or wear. The finish, which is acid resisting, is works bonded to the asbestos-cement. "TURNALL" "Colourglaze" is available in a wide range of colours.

with "TURNALL"

"Colourglaze" FINISH

"EVERITE" REGD TRADE MARK ASBESTOS-CEMENT RAINWATER GOODS

Only six of the available colours are shown in this advertisement. For full details of range please write for illustrated leaflet ZOO/CG/RWG.

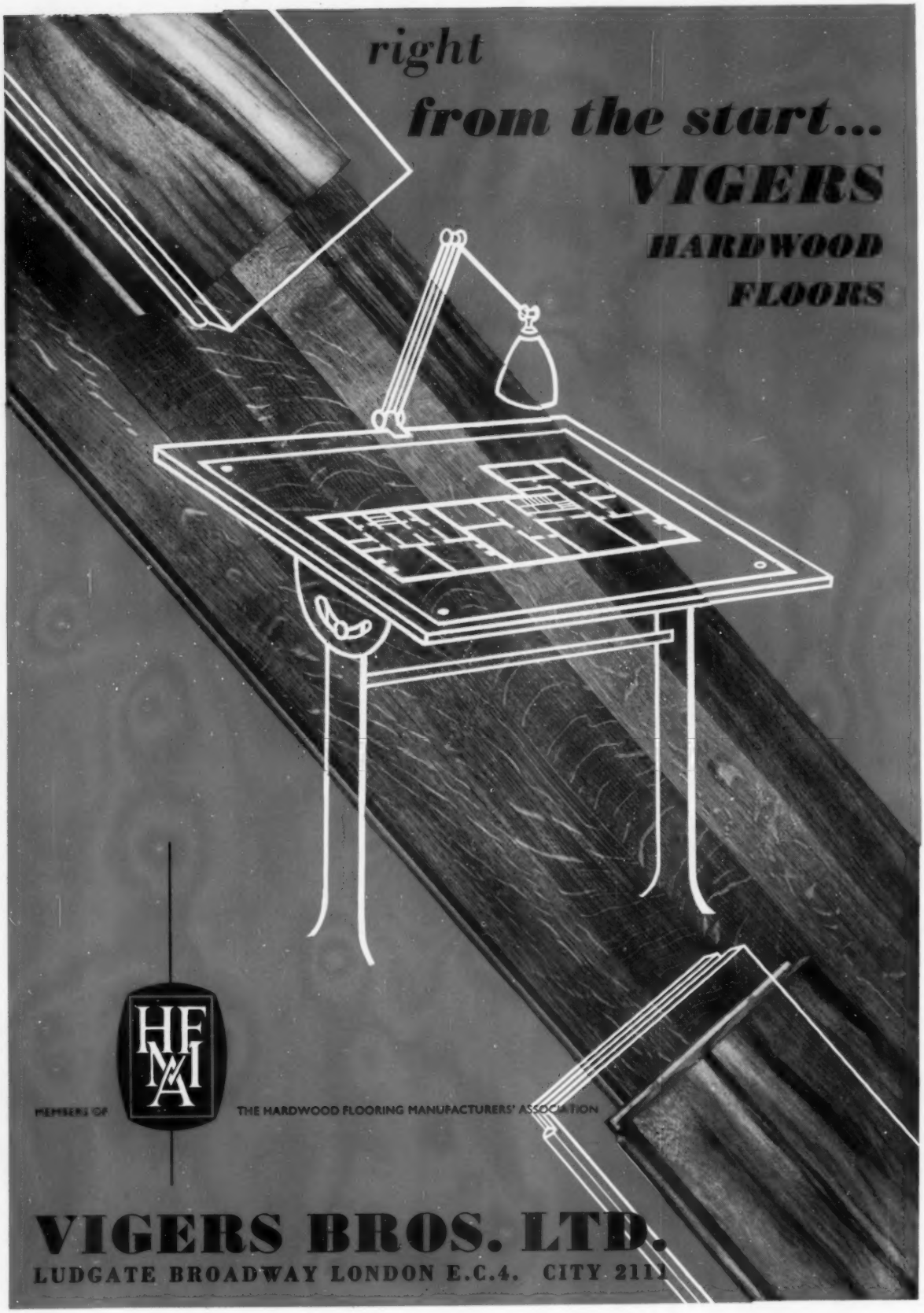
The colours shown are facsimile, subject to the limitations of reproduction.

TURNERS ASBESTOS CEMENT CO LTD

A MEMBER OF THE TURNER & NEWALL ORGANISATION

TRAFFORD PARK MANCHESTER 17

C.G. 1


right
from the start...
VIGERS
HARDWOOD
FLOORS
HFMA
MEMBERS OF THE HARDWOOD FLOORING MANUFACTURERS' ASSOCIATION
VIGERS BROS. LTD.
LUDGATE BROADWAY LONDON E.C.4. CITY 2111

Men with their trade at their finger tips

advise Architects to specify

PERMANITE
DAMP COURSES

PERMALUME · **ASBEX or LEAD ASBEX**
Aluminium Lined — Asbestos or Asbestos and Lead Base

Manufactured and supplied by

PERMANITE LIMITED 455 OLD FORD ROAD · LONDON · E.3

Klinger Bill's Capers No.4

Klinger Bill is always keen
to lend a helping hand
and here he is upon the scene
making the bathroom grand.

Mum wanted panels bright and gay
so they were making sure
of doing it the easy way
with modern Klingdecor.

Klingdecor—The finishing touch that means so much. You can cut Klingdecor with any sharp tool and then fix it in no time. And, if you want to bend it to shape, you'll find that's easy too! Flexible Klingdecor really is the handiest, most hardwearing surface available. And, what's more, it's stainproof, heatproof and will not easily scratch. Cigarettes won't burn it. Klingdecor is non-porous and comes in a wonderful range of patterns and colours. Klingdecor also costs less than you think, so why not send now for FREE samples and full details.

It's so easy to use

KLINGDECOR

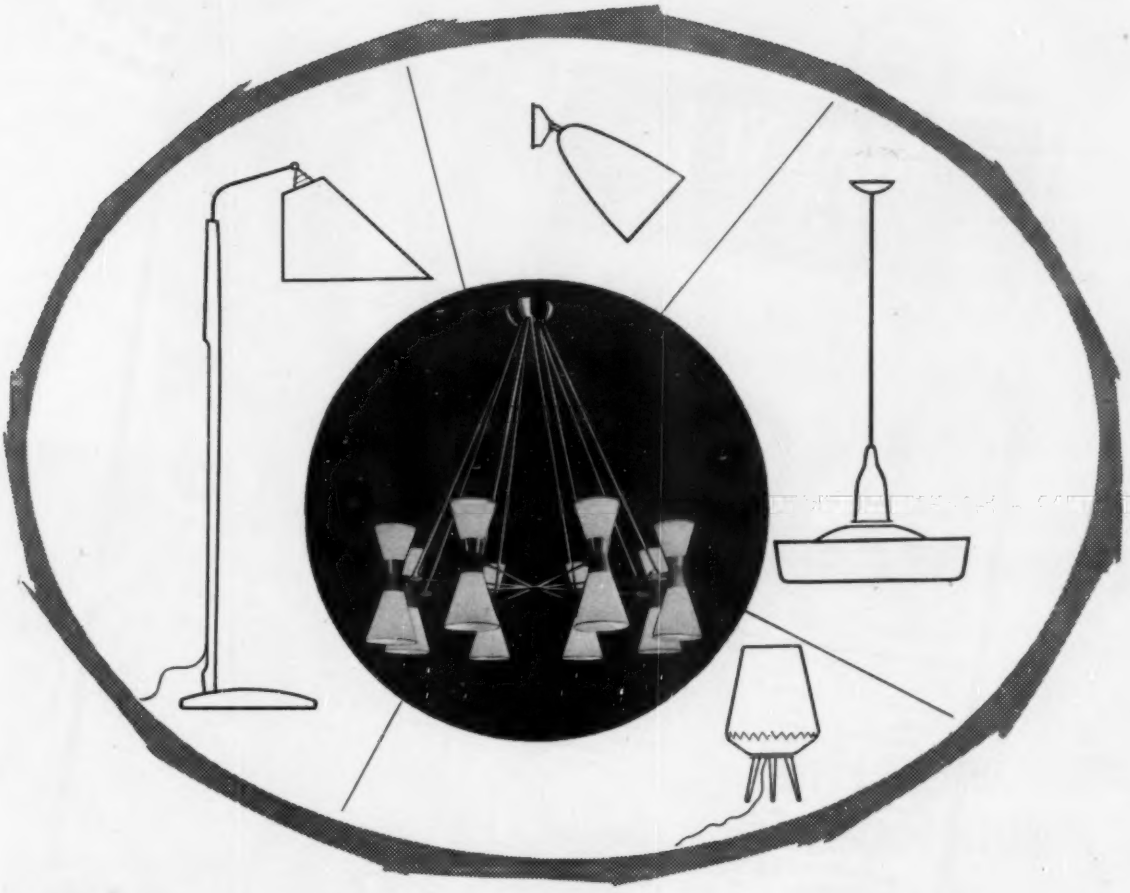
Regd. Trade Mark

the surface that TOPS everything!

Another KLINGER Product. *Manufactured by* Richard Klinger Ltd., Klingerit Works, Sidcup, Kent.

Enquiries to :—Main Distributors : C. V. Creffield & Co. Ltd., Leybourne Wharf, Horton Bridge Road, West Drayton, Middx. Area Distributors : James Rhodes & Co. Ltd., Wharf Street Saw Mills, Bradford 3 — Arnold Laver & Co. Ltd., Bramall Lane, Sheffield 2 — Brownlee & Co. Ltd., City Saw Mills, Port Dundas, Glasgow, C.4. Lytle & Pollock Ltd., Duncrue Street, Belfast — Meggitt & Jones Ltd., 28 St. Mary Street, Cardiff — J. R. Cull & Sons (1948) Ltd., 44 Queen Street, Newton Abbot. J. W. Huelin Ltd., Guernsey and Jersey.

universal lighting



The Mondolite range of fittings achieves the widest possible combination of lighting effects from a limited number of standard parts and materials. This unique design series offers tubular suspension, ring or radial pendants, recessed, wall, table or standard fittings to give general, diffused, or directional lighting. They cover all possible tastes and requirements, are robust in construction and finished to the high standard for which Troughton & Young is renowned.

»MONDOLITE«

Mondolite is part of a comprehensive range which includes Versalite, for directional lighting, Ultralux for general lighting, and Tubalux for fluorescent lighting — all to be seen at THE LIGHTING CENTRE.

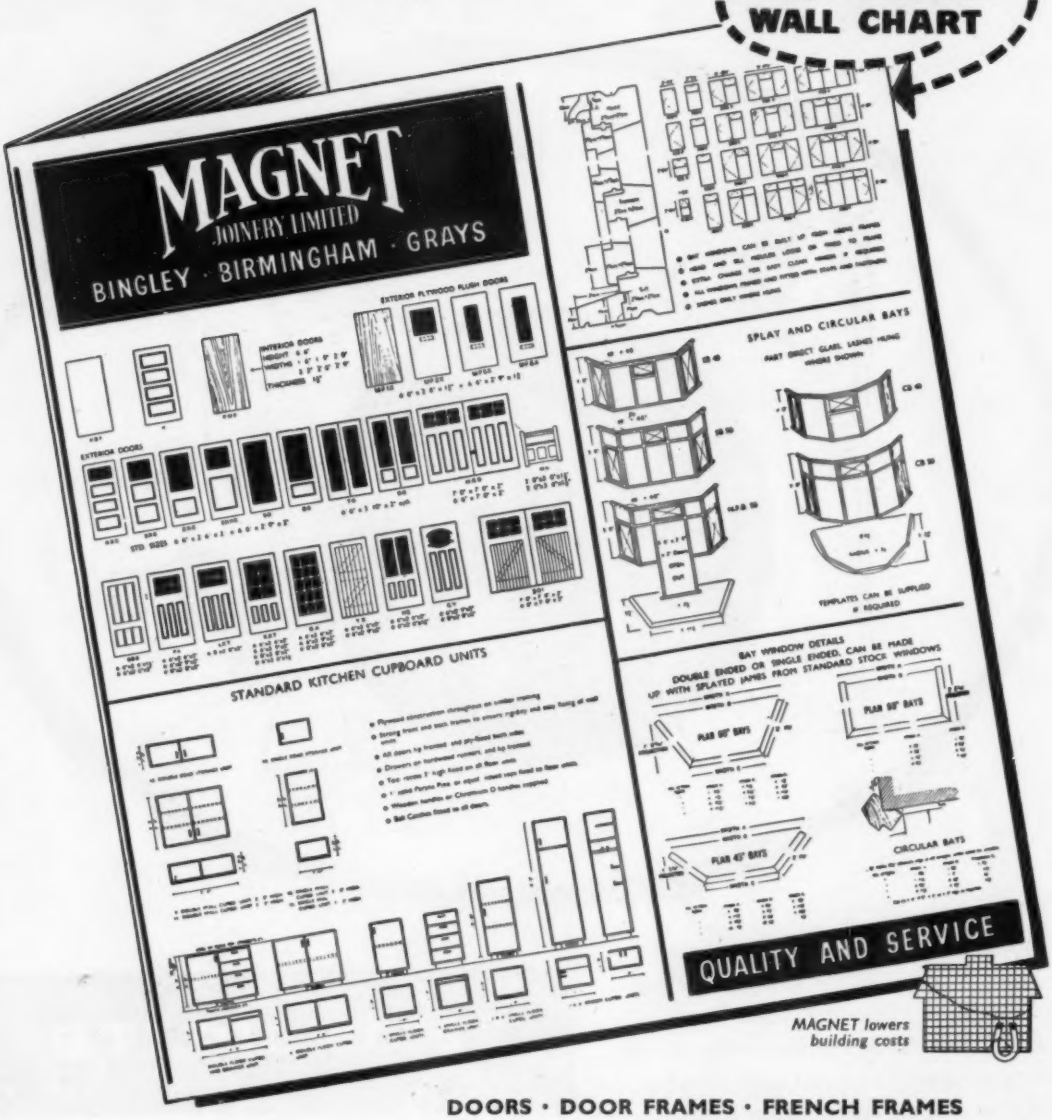
TROUGHTON & YOUNG

TROUGHTON & YOUNG (Lighting) LTD., *The Lighting Centre*,
143 Knightsbridge, London, S.W.1. *'Phone KENsington 3444*
And at 46 Rodney Street, Liverpool 1

B

FREE ON REQUEST!

The MAGNET WALL CHART



DOORS · DOOR FRAMES · FRENCH FRAMES

WINGS AND VESTIBULE FRAMES · STANDARD STOCK WINDOWS

SPLAYS AND CIRCULAR BAYS · BAY WINDOW DETAILS

STANDARD KITCHEN CUPBOARD UNITS

MAGNET JOINERY LIMITED

FOR STANDARDISED JOINERY

For service and immediate delivery from stock write to:

Whitley Street, **BINGLEY,** Yorkshire 'Phone: Bingley 4401 (5 lines)

London Road, **GRAYS,** Essex 'Phone: Grays, Thurrock 2077

Love Lane, Aston, **BIRMINGHAM** 'Phone: Aston Cross 3291 (3 lines)

View of part of the BURTON HOUSE ESTATE, STAFFORD By courtesy of the KINGSWAY HOUSING ASSOCIATION LTD.

EVERY HOME NEEDS CERAMIC TILED FIREPLACES

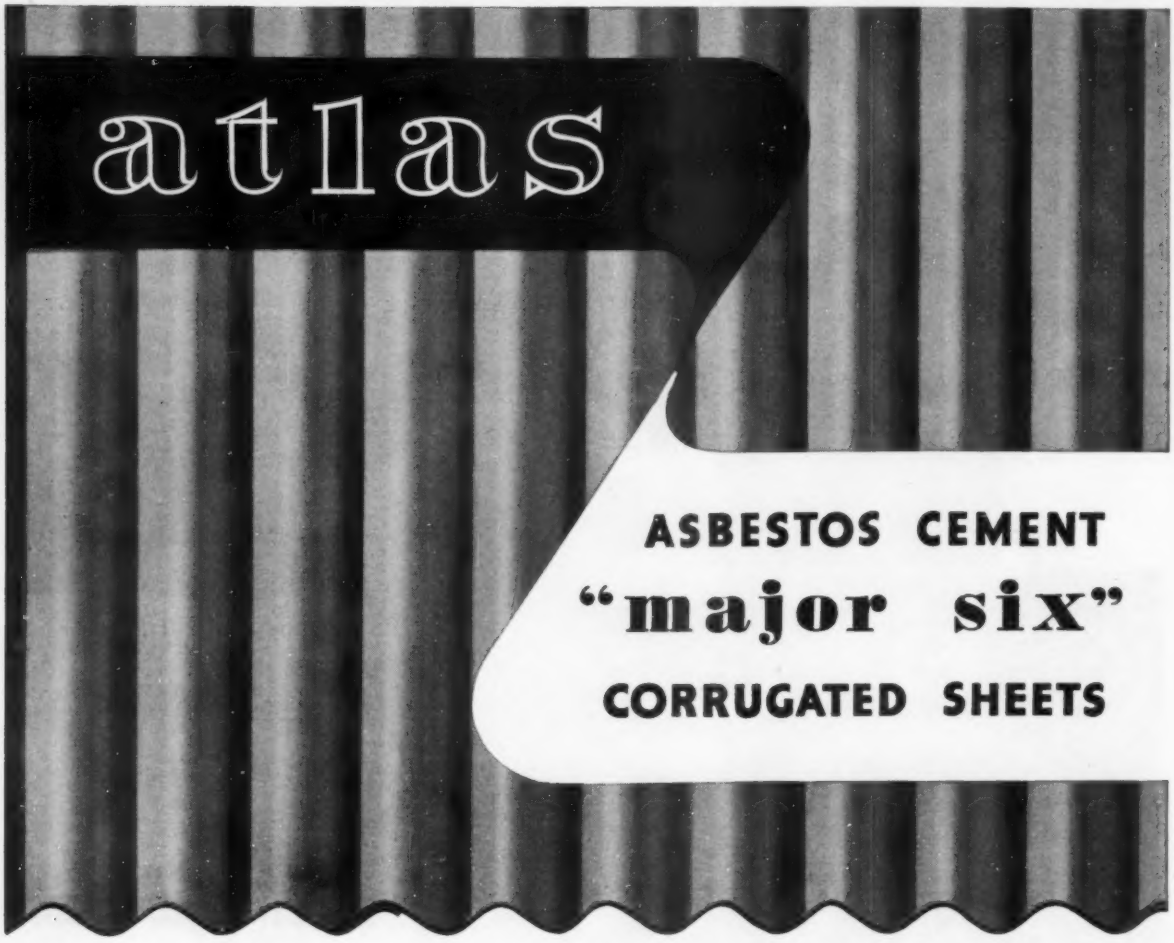
Whether for a new housing estate or a single dwelling—Ceramic Tiled Fireplaces are essential.

Their special qualities make them the ideal setting for every type of smokeless fuel appliance.

Ceramic Tiled Fireplaces are helping in the drive to eliminate atmospheric pollution without destroying the traditional charm of an open fire.

Ceramic TILES

Glazed & Floor Tile Manufacturers' Association · Federation House · Stoke-on-Trent



Roofing of **extra** durability and stability—that's MAJOR SIX sheeting, a non-warping, non-cracking material of increased covering capacity . . . and a side lap offering definite advantages.

MAJOR SIX sheeting is proving its adaptability to all constructional and weather conditions, giving —always— a dependable roofing service.

We would like to send you detailed technical literature and full information. Will you 'phone or write today

Atlas Stone CO. LTD.

ARTILLERY HOUSE,
ARTILLERY ROW, LONDON, S.W.1
Telephone: ABBey 3081-2-3-4.
Telegrams: London Office: "Atlastonco Sowest."

Works at: MELDRETH - GREENHITHE - STROOD - CAMBRIDGE - PARK ROYAL (London) - SHORNE - WING - RYE (Sussex)

KAYENCO

FULLY AUTOMATIC BOILERS

FOR EFFICIENT HEATING AND CONSTANT HOT WATER IN EVERY TYPE OF BUILDING

Here is the finest range of fully automatic gas and oil-fired boilers you'll find anywhere. Built for high efficiency, economy and long service, handsomely styled and supplied complete for easy installation and maintenance, Kayenco boilers are smokeless, safe, labour and space saving. For factories, flats, schools, shops, offices and private dwellings, there's a Kayenco model that's exactly right for the job—in size, power, performance and price.

OIL FIRED

Kayenco HIKON - MAJOR

Specially engineered for oil-firing and incorporating the new principles of Hikon heat exchange. 80% guaranteed net efficiency. Fully automatic. Robust construction. 125,000 to 300,000 B.T.U.

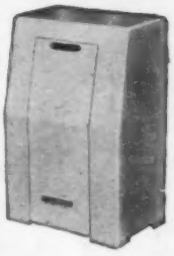
Kayenco HIKON-JUNIOR

This smaller version of the Hikon-Major is outstanding for its remarkably low oil consumption and low first cost. Guaranteed 75% net efficiency. 25,000 to 100,000 B.T.U. 'K' Type: Fitted with fully automatic on/off operation Kieft vaporising burner. 'L' Type: Fitted fully automatic Lucas 'Oilomatic' low pressure burner.

GAS FIRED

Kayenco SUPERB

Sets a new high standard in design and performance with every necessary feature for top efficiency, safety and cleanliness. Fully automatic. Thermostatically controlled. 30,000 to 300,000 B.T.U.



Kayenco POPULAR

The lowest priced, fully automatic, domestic boiler of its type, built to the traditional engineering standards of the Kayenco Superb.

All KAYENCO Boilers comply fully with B.S.S. Recommended by the Gas Council, Council of Industrial Design, Good Housekeeping Institute. Widely used by Government Departments, H.M. Forces, County and Local Councils and many industrial concerns.

KAYENCO BOILERS

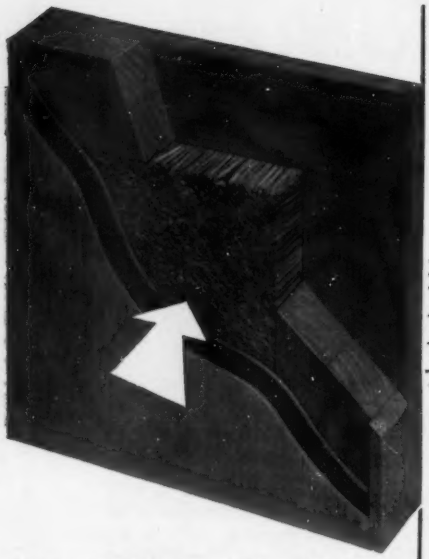
MADE AND GUARANTEED BY THE SPECIALISTS IN OIL AND GAS-FIRED BOILERS AND BACKED BY FULL SERVICE-AFTER-SALE:

FREDERICK KAY (ENGINEERING) LTD. · NASHLEIGH WORKS · CHESHAM · BUCKS · Telephone: Chesham 920/1

The New Flush Door

THAMESPLY WERNO

STRENGTH IS IN THE CORE



THIS TUBULAR CORE MEANS A BETTER DOOR

Every square foot of the new Thamesply-Werno Flush Door is packed with more than 10,000 equal length tubes of straw. The patent production process ensures uniformity of thickness and density.

POINT FOR POINT, PRICE FOR PRICE, THIS THAMESPLY-WERNO FLUSH DOOR STANDS HEAD AND SHOULDERS ABOVE THE ORDINARY FLUSH DOOR.

The Thamesply-Werno tubular core construction gives these advantages over the average flush door:-

- ★ **Greater strength and resistance to impact**
- ★ **Up to 40% more soundproof**
- ★ **Greater thermal insulation because of the closed cell construction**
- ★ **More fire resistant. Straw closely packed does not burn easily**
- ★ **Sealed against pest infestation.**
- ★ **Doors shot to exact size.**

PLYWOOD-FACED INTERIOR AND EXTERIOR DOORS

HARDBOARD-FACED INTERIOR DOORS

Supplied only through the usual trade channels

THAMESPLY Registered Trade Mark

THAMES PLYWOOD MANUFACTURERS LTD.

HARTS LANE · BARKING · ESSEX *Telephone : RIPpleway 5511*

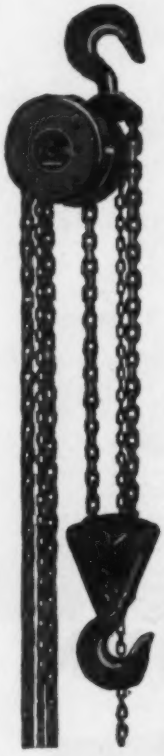
Triple Gear Chain Blocks.
Electric Chain Blocks.
Friction Hoists.
Sling Chains.
Hydraulic Lorry Loaders.

FELCO
LIFTING APPLIANCES

Travelling Chain Blocks.
Electric Wire Rope Pulley Blocks.
Ratchet Hoists.
Equalising and adjuster Slings.
Handy Lifts.

ELECTRIC CHAIN BLOCKS

Silent in operation. Controlled by Pendant Chains.
Automatic control switch cuts off at upper and lower limit of travel.
Electrically operated magnetic brake.



ELECTRIC WIRE-ROPE BLOCKS

Short Headroom.
Adjustable upper and lower over-travel limit switches.
Electrically operated magnetic brake.
Gears run in fully enclosed oil bath.
Maximum speed and height of lift.

HANDY LIFT

2 cwt. capacity. Turning effort when raising 2 cwt. only 18 lb. Lifting range 5 ft. Total weight 6 lb. No loose chains. All chains are stored within body of hoist whilst raising the load.

TRAVELLING CHAIN BLOCKS

Made to the strict limits of other Felco products in capacities to suit all purposes.

ADJUST-A-LEG EQUALISING SLING

Entirely new design, giving two slings in one. Sling legs lock automatically when lifting starts. Saves labour, time and accidents.

TRIPLE GEAR CHAIN BLOCKS

Single, Double and Multiple Purchase with capacities from ½ to 10 tons.

RATCHET HOIST

Incorporating a patented Overload Preventer giving greater security and safety to the operator, also reducing wear and saving cost of repairs and maintenance.
There is a free-wheeling feature enabling quick adjustment of unloaded chains.

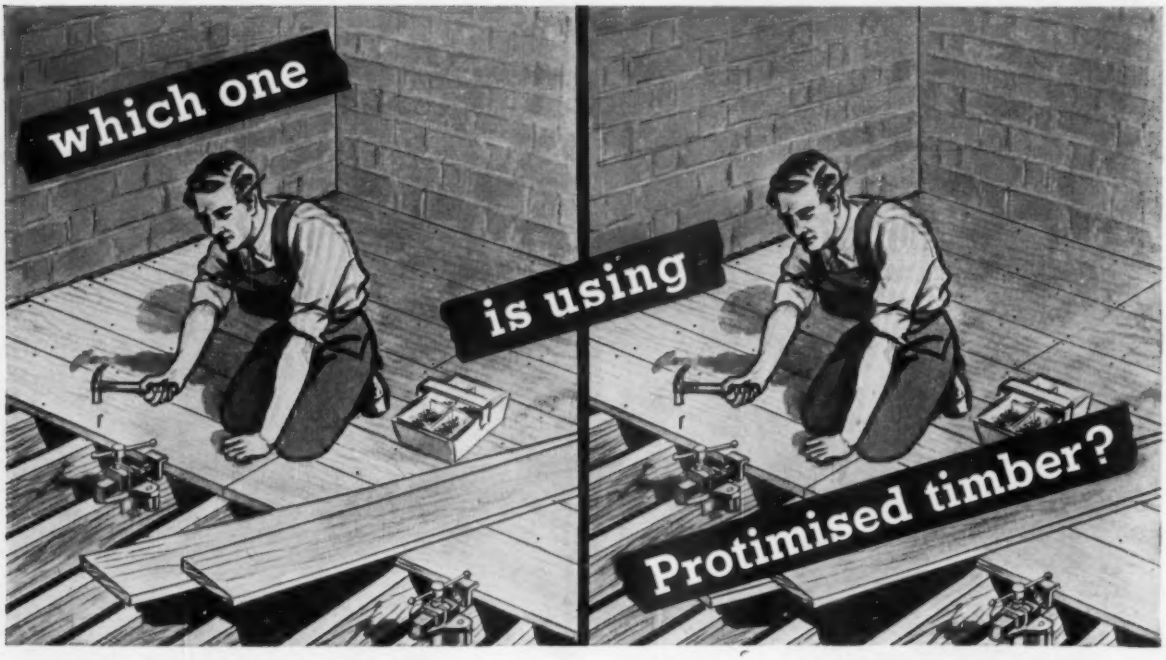
Telephone :
Kensington 7401
(3 lines)

FELCO HOISTS LTD

29 CROMWELL ROAD, SOUTH KENSINGTON, LONDON, S.W.7

Telegrams :
'FELCOHOIST'
Wesphone
London

F2/56



These floors look the same now—but time may reveal a vital difference. Timber that has been impregnated with Protim is permanently protected against both Dry Rot and Woodworm. What is more, the Protim treatment cannot cause warping or shrinkage when the timber is in use, for Protim is a water-free preservative. It will not affect the seasoned state of timber, so that costly time-wasting kilning or re-seasoning are unnecessary.

Protim is non-corrosive and will not be neutralised by mortar. Once dry and subject to the use of a good sealer primer, Protimised timber can be overpainted. It has been successfully tested to BS.838 and complies with BS.1282 and Building Bye-Laws. For current contracts and all future work, use Protimised Timber—you'll be protecting your reputation as well as the building !

PROTIM — a triumph of research

The formula for Protim was evolved only after exhaustive tests and research into the properties of its constituents. These include Shell's famous Dieldrin, 8-10 times stronger than D.D.T. ; Chlorinated Naphthalenes and Phenols and mineral oil solvents.

Not only do these constituents provide double protection against Dry Rot and Woodworm, but also have wonderfully rapid, deep and thorough penetrative qualities which completely dispense with the need for pressure treatment.

FIRST NATION-WIDE SERVICE!

Leading Timber Merchants throughout the Country can now supply Protimised timber.

This is the first nation-wide service for the supply of timber treated with a water-free preservative — at a competitive price.

Permanently protect all new buildings against DRY ROT & WOODWORM

by using water-free impregnated Protimised Timber

Protim is a Regd. Trade Mark

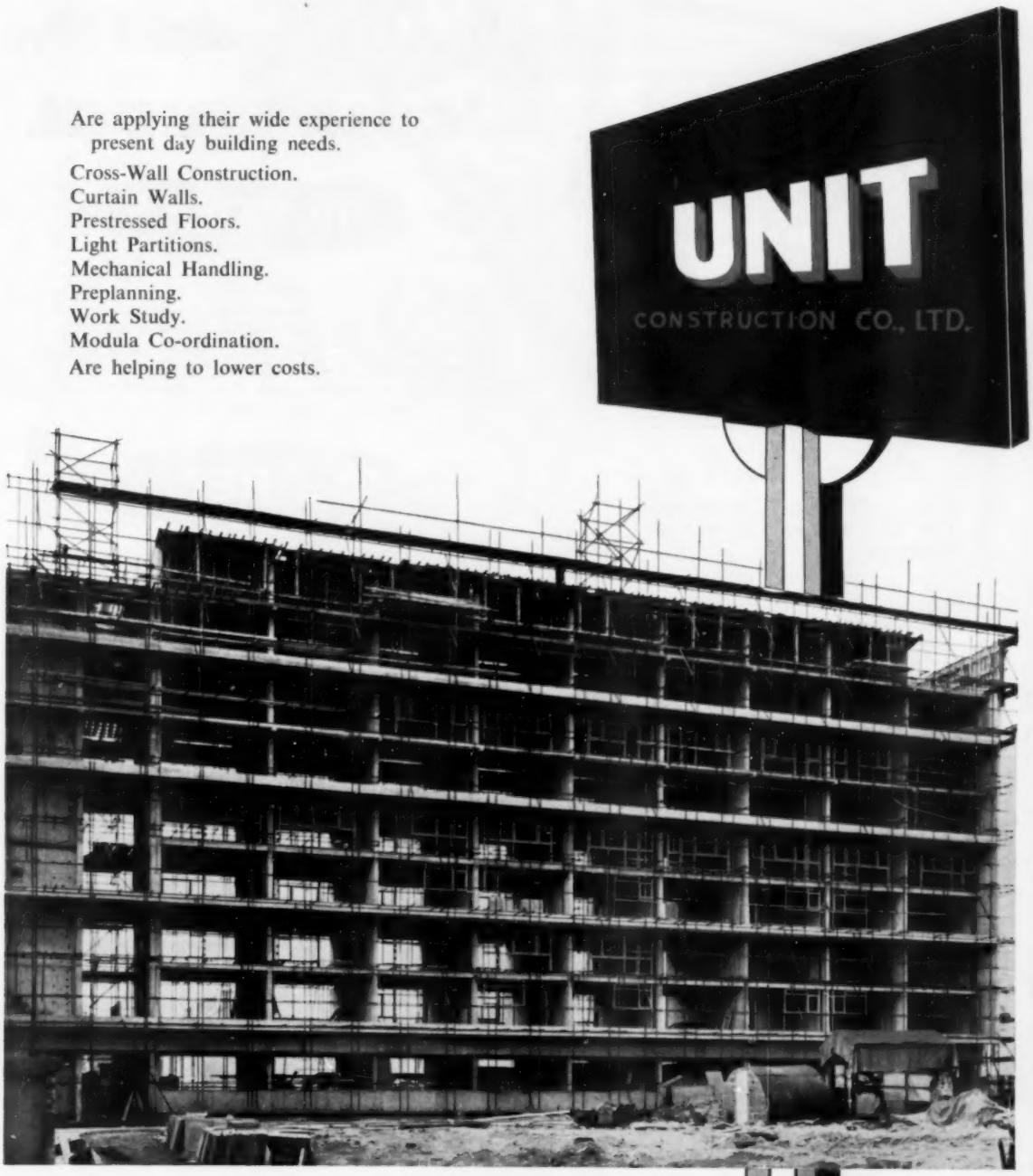
Marketed by **PROTIM LIMITED, 356/368 Evelyn Street, London, S.E.8.** *Telephone : TIDeway 4611*

TIB18

Are applying their wide experience to present day building needs.

Cross-Wall Construction.
Curtain Walls.
Prestressed Floors.
Light Partitions.
Mechanical Handling.
Preplanning.
Work Study.
Modula Co-ordination.

Are helping to lower costs.



New homes constructed for the London County Council at Bulow Road, Fulham — Architect to the Council, J. L. Martin, M.A., Ph.D., F.R.I.B.A., Whitfield Lewis, A.R.I.B.A., Principal Housing Architect.

THE UNIT CONSTRUCTION CO. LTD.,

Building & Civil Engineering Contractors,
34 ST. JAMES'S STREET, LONDON, S.W.I.

PRODORITE LTD

Cement Prodor

A self hardening cement giving protection from corrosion in most acid conditions.

'Asplit' Cement

This cement is resistant to oils, solvents and mixed acids and alkalies.

'Furacin' Cement

Used as an alternative to Asplit. It possesses very great resistance to acids also caustic alkalies.

C.N.S.L. Cement

A cement of the cashew nut resin type, it possesses greater resistance to oxidising acids than any other resin cement.

our CEMENTS · MASTICS & COATING MATERIALS are world famous for the prevention and control of corrosion

- HEAD OFFICE -

EAGLE WORKS, WEDNESBURY

TELEPHONE: WED 0284 5 LINES

- LONDON OFFICE -

ARTILLERY HOUSE, ARTILLERY ROW, S.W.1

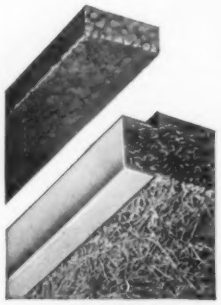
TELEPHONE: ABBEY 3816 5 LINES

CORK and the 'COLD BRIDGE' in ROOFS

As is well known, structural members of high conductivity, in contact with the upper surface and the soffit of a roof, form in winter a "cold bridge" between the two surfaces.

For example: the channels of woodwool roofing slabs may in winter form such a cold bridge, with the result that in cases of high humidity the temperature of the soffit of the channels may be below dewpoint, when condensation will occur.

★ 3" REB.



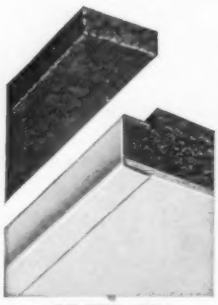
3" REB.

THERMACOUST 3" Rebated Channel Reinforced Roofing Slabs (*3" REB), allow for a 1" thick cork strip to be placed over the channels, *without overall increase in constructional thickness.* This overcomes the "cold bridge" and prevents condensation.

Why CORK? Because to be effective in this reduced thickness the material must have nearly twice the insulating value of woodwool.

3" REB is unique. In one cheap unit all the following qualities are combined:—

- **Low first cost and simplicity of construction.**
- **30 lbs. superload up to 7' 0" span.**
- **Total roof thickness less than 4", saving inches of brickwork.**
- **Lightness of weight (8 lbs./sq. ft.), saving tons of supporting structure.**
- **Thermal insulation (U=0.17 BTh.U), saving in fuel and size of heating installation.**
- **Fine textured finish needing little decoration.**
- **Sound absorption (0.85 at 500 cps.)**
- **Condensation-free in very high humidities.**
- ★ **Availability ex stock in large quantities.**



3" REB. PP.

And now we offer, where no sound absorption is required, 3" Rebated Channel Reinforced Pre-plastered Thermacoust (3" REB PP) with the following *additional* advantages.

- **Smooth finish.**
- **Highest possible light reflection.**
- **Preformed plaster in its strongest form.**

★ *Exclusively*

Thermacoust

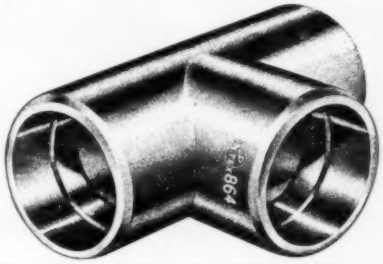
Patent 676,385. Other patents pending

T.20

THERMACOUST LTD., 20 Albert Embankment, London, S.E.11. *(RELiance 7281)*

I.C.I tubes

Copper Tubes from Kirkby
to BS 659 and BS 1386 for gas, water and waste services. Tubes for radiant panel heating, locomotive and ship services, refrigerators, chemical and general engineering.



'INTEX P.T.'

& fittings

Tube Fittings from Fyffe's to BS 864
'INSTANTOR'
'KUTERLITE'
'INTEX P.T.'
Easy
Quick
Reliable

ICI

IMPERIAL CHEMICAL INDUSTRIES LIMITED, LONDON, S.W.1.

M.452A

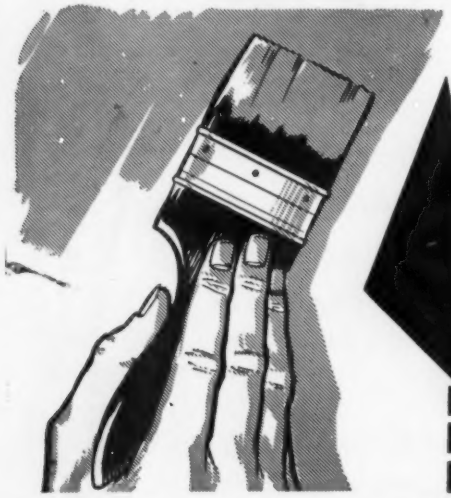
S·W·
FARMER
& SON LIMITED

EST. 1898

FABRICATORS IN STEEL

IRON STAIRCASES STEELWORK BALUSTRADING

S.W. FARMER & SON LTD, COURTHILL ROAD, LEWISHAM, LONDON, S.E.13
'PHONE: LEE GREEN 4334-9.



ON THE SPOT!

There is no need to be - if you use a 'J. B.' product. It is not merely the paint you use, it's your reputation at stake. Top grade materials plus craftsmanship ensure no lowering of your good name. You have no worries with these three established favourites.

IVOMATT Flat Wall Finish
Ideal for Factories, Schools, Canteens, suitable for spray or brush. Easy working, full-bodied, drying with a hard matt washable finish.

IVOMUL Emulsion Paint
Perfect for new Plaster, but satisfactory on almost every surface. Dries by evaporation and can normally be second-coated within 2 hours. Practically odourless, suitable for brush or spray; flows well and brushes easily

IVOGLOS Enamel Finishing Paint
Specify IVOGLOS on every job calling for a hard durable gloss finish. IVOGLOS is dense bodied, easy working, and a credit to the man who applied it!

JOHNSON BROTHERS LTD
CLEVELAND WORKS, SCULCOATES, HULL TEL 34207 GRAMS 'NERO'
Makers of GOOD Paints

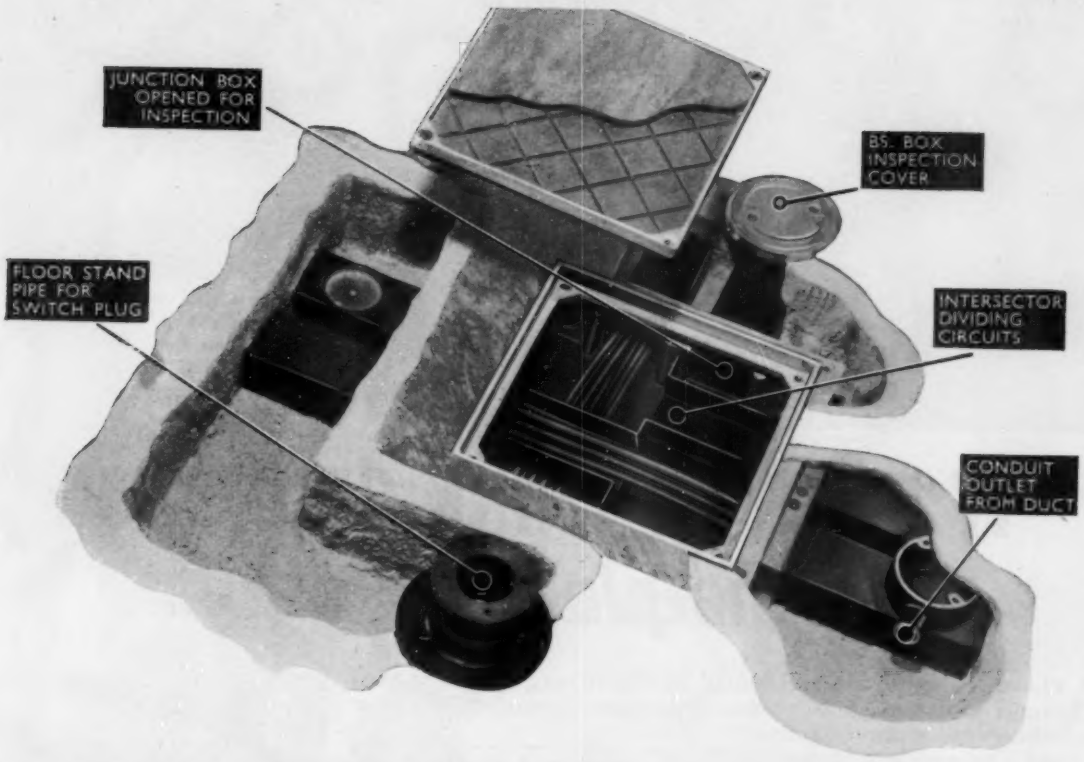
LONDON
BOWLES ROAD, S.E.1.
Telephone Bermondsey 2575
Telegrams 'GLOSSILY', SEDIST

GLASGOW
Wellcroft Works,
Cumberland Lane, C.S.
Telephone South 1901
Telegrams APLATONE

NEWCASTLE
28 LEAZES PARK ROAD.
Telephone 27890

G.E.C.

under-floor metal duct system


JUNCTION BOX OPENED FOR INSPECTION
BS. BOX INSPECTION COVER
FLOOR STAND PIPE FOR SWITCH PLUG
INTERSECTOR DIVIDING CIRCUITS
CONDUIT OUTLET FROM DUCT

- ***All joints in duct, junction boxes and accessories are secured by driven taper pins ensuring positive earth continuity.***
- ***Conduits may be connected to each duct within the floor screed and also to the corners of the junction boxes.***
- ***Junction boxes are available in one, two, three or four-way types according to requirements.***
- ***The minimum depths of the junction boxes from finished floor level to base are as follows:—***

2½ in = 2½ in x 1½ in duct
2½ in = 2 in x 1½ in „

The most modern method of distribution for electrical services in offices and commercial buildings is the G.E.C. under-floor metal duct system. This system has been developed after long experience and collaboration with architects, consultants and contractors. The whole system can be planned in advance and provides complete flexibility, mechanical strength and earth continuity.

THE GENERAL ELECTRIC CO. LTD., MAGNET HOUSE, KINGSWAY, LONDON, W.C.2

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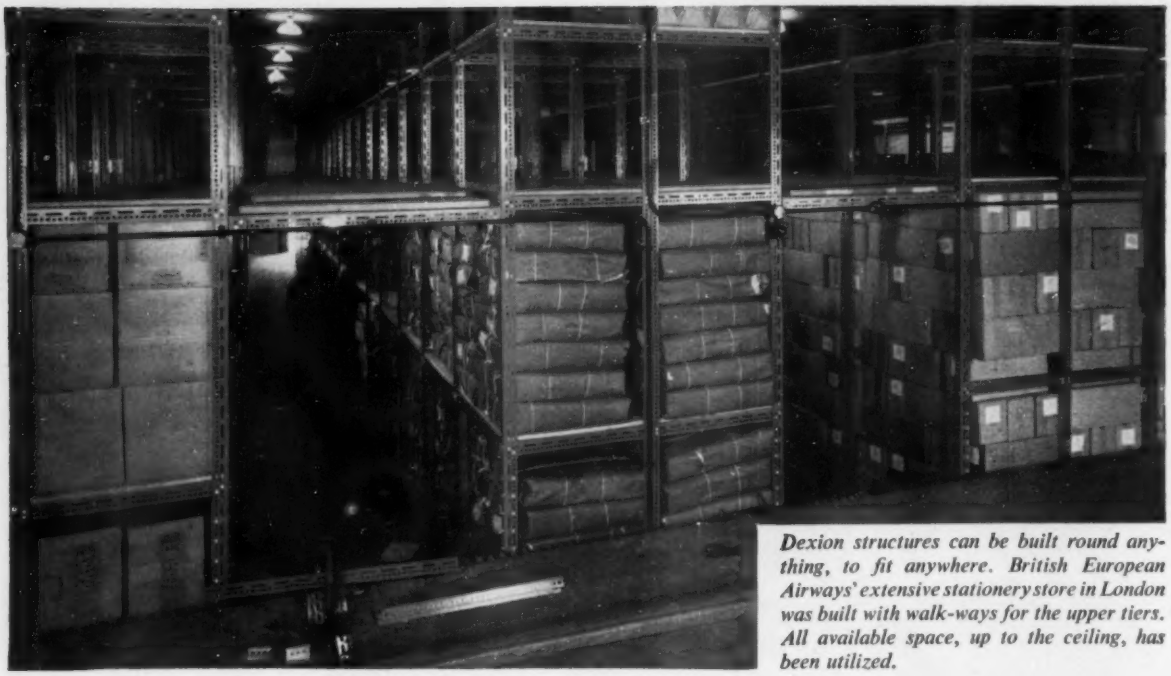

Dexion structures can be built round anything, to fit anywhere. British European Airways' extensive stationery store in London was built with walk-ways for the upper tiers. All available space, up to the ceiling, has been utilized.

IT PAYS TO THINK OF DEXION
–at the planning stage

A FACTORY LAYOUT must be flexible, capable of being adapted at short notice to changing circumstances. This applies particularly to storage requirements and works equipment.

There is no more versatile material for building stores and equipment, exactly to your own designs, than Dexion Slotted Angle. Such Dexion equipment is quick and cheap to install. And any Dexion structure can be readily adapted and altered to meet changing needs. There is no waste, no scrap: Dexion is fully recoverable, and can be used again and again.

When you are planning the building and layout of a factory, Dexion deserves careful consideration at an early stage. This versatile material may bring about important economies, initially and for years to come.

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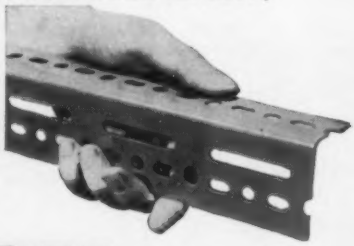

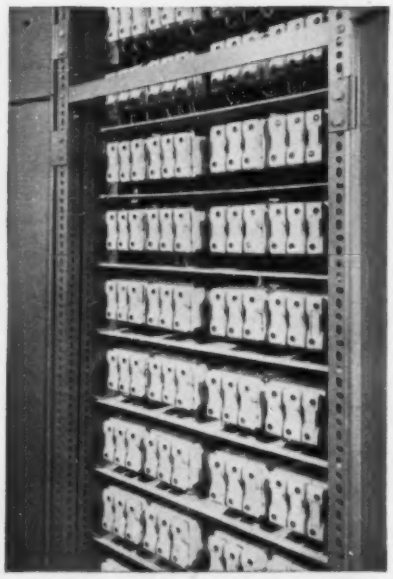

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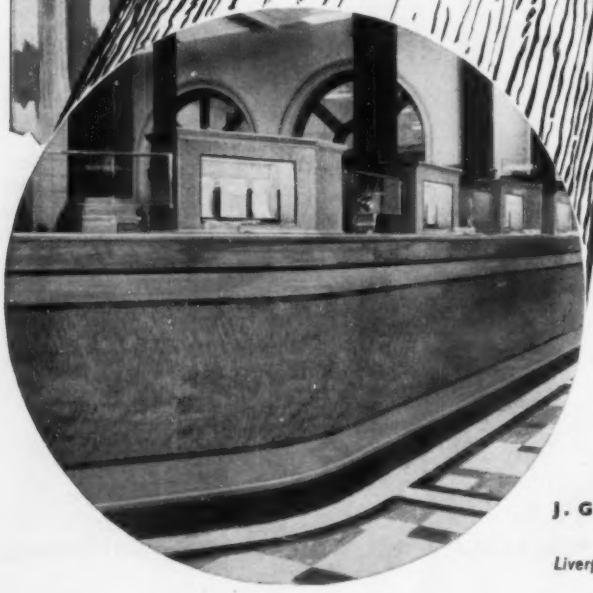

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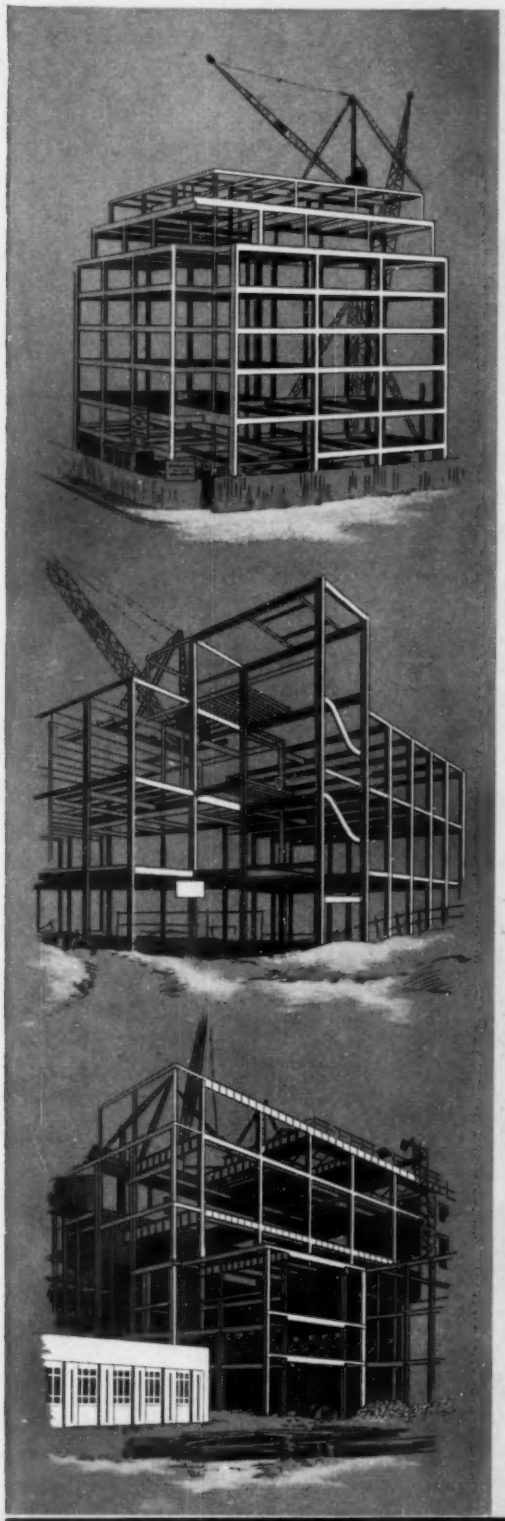

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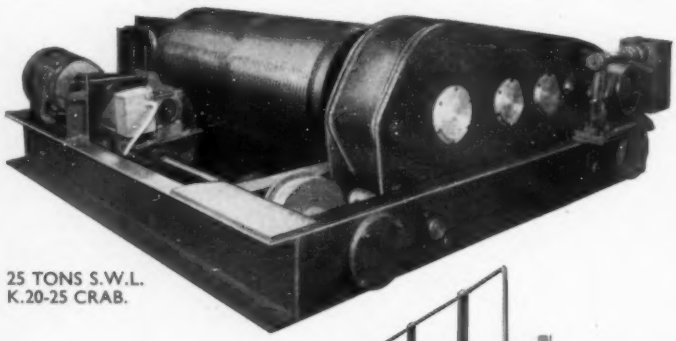

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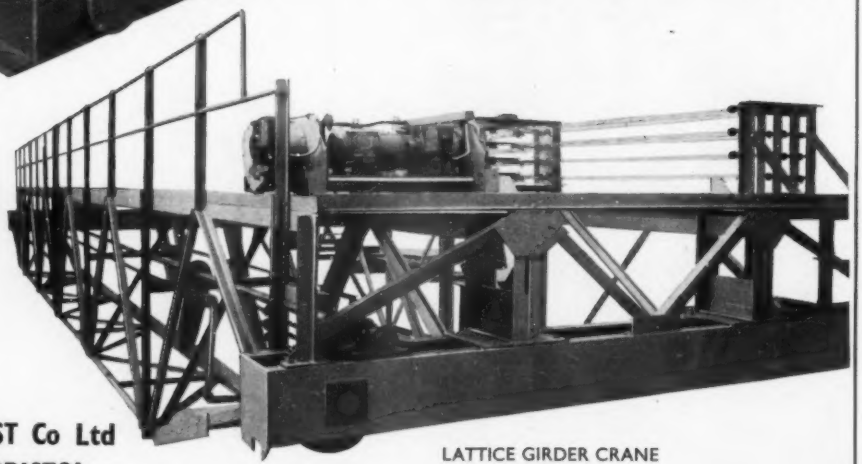

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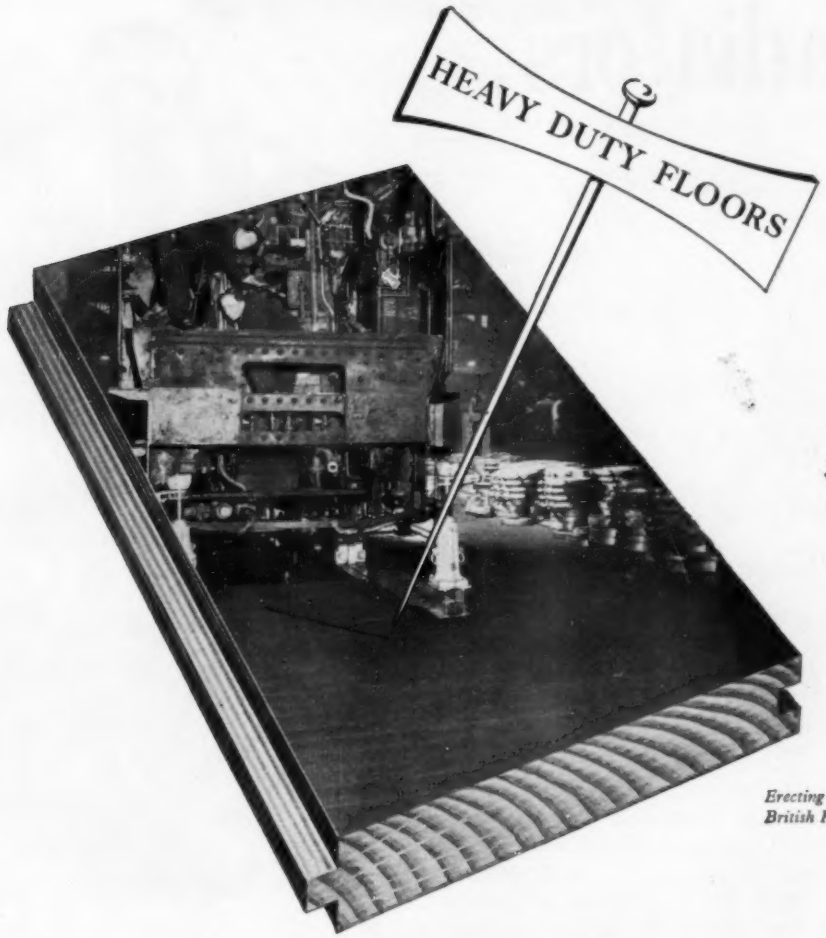

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Vol. 210 No. 8

THE ARCHITECT & BUILDING NEWS

August 23, 1956

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THE SUEZ CANAL

THE Suez Canal has many points of interest for architects and builders. And since on the eve of going to press a conference to plan its future management is in full swing, it is worth recording some of the engineering problems which have beset the path of its construction and maintenance.

Long before the French engineer, Ferdinand de Lesseps, obtained a concession for cutting a direct maritime canal across the Isthmus of Suez, other canals had been constructed, had fallen into disuse, had long been forgotten except by historians. Pharaoh Rameses II built a wide navigable channel hundreds of years before Christ; this was developed further by the Romans, but the Byzantines allowed it to silt up. Amru, Governor of Egypt, about A.D. 641, cut another canal fed by the waters of the Nile; but this was opposed strongly by another Egyptian and in time locks fell into ruin, banks crumbled away, the canal became unusable.

All this and much other experience from the past was studied by de Lesseps who consulted a British group, with Robert Stephenson as its engineer, about his Suez project. Capital and experienced engineers and builders were drawn from ten countries and throughout building operations de Lesseps profited by the advice of experts from England, Austria, Spain, France, Sardinia, Holland and Prussia. The canal was commenced in 1859 and after ten difficult years which included 1865, the year of the cholera epidemic, the canal was officially opened.

During the period of its construction many changes were made in the methods and materials of construction. Picks and baskets used to begin with were replaced by modern excavating machinery, particularly dredgers. A French engineer, Levalley found it saved time and money to flood depressions in the ground and then to dredge out the soil; at least 60 dredgers were in use at one time. Stone from quarries at Nex near Alexandria was used at first for building jetties, but proved too costly and was replaced with artificial blocks of lime mortar and sand which lasted for more than 30 years. The cost of dredging and excavating amounted to three times the original estimates, and building banks, harbours and piers even more.

But the real problem of the canal since 1869 has always been the need for constant maintenance and enlargement, a story plain to read from the plans and pictures in the offices of the Suez Canal Co., at 1 Rue D'Astorg, Paris. Ships passing through the canal have more than doubled in length and increased nearly four-fold in breadth, since the early years of the canal.

The first improvements of the canal were planned as early as 1876, when bends were straightened, banks further protected and widenings were made. In 1884 a further lot of improvements took place; the canal was widened to 124 feet and the depth was increased to over 29 feet. At the beginning of the century more deepening and broadening took place to meet the needs of ships passing through the canal.

Maintenance of the depth of the channels has always been a most difficult technical problem. It has entailed a constant and patient fight against silting, and most serious situations have had to be faced. On one occasion, after a heavy Spring storm, some 4,000,000 cubic yards of silt (the normal silting over a period of five years), were deposited in the channel in only a few days. Added to the problems of maintenance are the difficulties of future construction which the canal management will have to face; already some of the most modern oil tankers are too broad and their draught too deep when fully loaded, to pass through the canal.

History points to the fruits of neglect, disinterest or purely selfish ends, making clear the need to safeguard good management of the Canal for the benefit of mankind in general.

E

EVENTS AND COMMENTS

PLEASURE DENIED

Instead of sitting here in my dressing gown at six o'clock in the morning writing this I ought to be on my way to Calais to take part in a day of celebrations to mark the visit of M. Bernard Chochoy, Minister of Reconstruction and Housing. The invitation from the Mayor came out of the blue only a day or so ago. It is a lovely morning and I wish I had been able to accept the invitation to the very full programme of 'manifestations.' The Minister will be received at the Town Hall at ten fifteen, a wreath will be placed on the war memorial, the first stone of the Hotel des Postes will be laid. Then at eleven o'clock there will be a ten minute visit to two of the war damaged areas of the town followed by a quarter of an hour split between two building sites. In the next half-hour a bridge will be opened and the work of rebuilding the Chamber of Commerce building inspected. Then comes the 'inauguration du Minck'. I cannot imagine what this might be, but perhaps it is something to do with docks, dockers or minck coats. It must be fairly important because twenty minutes have been allowed for it. Pressing on from there a 'Groupe Scolaire' is to be visited but only for ten minutes, including travelling from A to B.

As I write this I wish more and more that I had been able to go. Particularly as the next manifestation is the inspection of work on the site of the new Gare Maritime. Did you ever stay in the old Hotel de la Gare Maritime? It was a wonderful place, occupying the first floor of the station, a long thin building between the platforms. It was high Victorian in character, brass and deep red plush with huge circular marble wash-basins somewhat oddly arranged in the top-lit central corridor. I stayed there just before the war and my peaceful dreams were most rudely shattered by a battery of small coast defence guns beginning practice within a couple of hundred yards of my window at 7 o'clock in the morning. I remember quite clearly the magnificence of the ham omelette which I had for dinner in the station restaurant.

The last visit is to another school, this time the Groupe Scolaire Chateaubriand and then quite naturally comes lunch, for which no less than two and a half hours have been allowed. Finally the Trade Fair will be opened and that will be that.

I can see it all; the sashes, the decorations, the Sapeurs-Pompiers, the town band, the schoolchildren, the police and the Anciens Combattants. The preparations for the lunch will have started by now. I can imagine the long tables set with a bottle a head; I can hear the metres of crusty bread being sliced and smell the garlic. Oh! I wish I were there.

From the exhibition 'This is To-morrow' at the Whitechapel Art Gallery until September 9th. This is the entrance, designed by Theo Crosby.

EAST COAST

Liverpool Street Station is being cleaned. This startling event may well unbalance its users mentally. It is an odd station associated in my mind with my earliest lone travel to a dank vicarage in wildest Essex. The Vicar's elder son had been to the war and a German rifle and an allegedly live stick bomb hung on the staircase wall. I was terrified to pass the bomb and always used the back stairs. The Vicar usually had egg on his bib but he was a kindly man. He was a widower, and his daughter played the harmonium in the empty church on Sundays. My friend and I sat on either side of her while she played and sang. Even now the mere sight or smell of a harmonium brings back feelings of alarm and embarrassment.

In those days trains on that particular line were still heated with huge flat metal hot water bottles upon which passengers put their feet. The hot water-bottles were covered with carpet and were brought along the platform in a large open boiler of some kind. On my way to the vicarage I got out at the wrong station and had to be fetched by the Vicar with his motor cycle and sidecar. It was not a successful holiday.

It only needs a visit to Liverpool Street or the sound of a railway engine making that odd tich-toch noise to bring it all back most vividly. You can see what the place has done for me.

Arriving in Ipswich and going on by car into the country, a whole new range of memories were stirred up. These more recent and dating only from the war

but forgotten until now. The Crown at Woodbridge, where, even in the Battle of Britain, comparative peace reigned and good food and drink were to be had. The miles of scaffold pole barrier on the beaches, the ever-changing pattern of pill-boxes as one infantry commander succeeded another, the dummy anti-tank mines and the pathetic bottles of petrol and tar in boxes under the stairs with the half-dozen hand grenades with which we were expected to repel the invasion.

The beaches are now clear except for the strangely corroded stumps of the scaffolding which provide admirable toe-stubbers for the unwary. The concrete things are very much still there and many of them would make good beach huts if a little imagination were used on them. As it is they are as much part of the scenery as the Martello towers of another war, and likely to remain so.

The country hereabouts is less messed up with recent developments than anywhere else I know, but it is littered with tumbledown cottages, many of which are empty. I found a pair yesterday on a perfect site, but they were beyond repair and appeared to be in imminent danger of collapse.

The weather remains wet and windy with occasional sun showers. I have hired a lumbering open boat with the flattering name of Captive Maid. She is no flash of lightning, but sails quite well although she leaks a bit. Baling was a bore until I bought one of those astonishing flexible dinghy pumps. Now instead of binding about baling, the children clamour to be allowed a turn with the pump and we are very much drier thereby.

The Deben has a difficult and somewhat dangerous entrance from the sea and is therefore comparatively little used by yachtsmen. This is a tremendous advantage. For the picnic boater it is a perfect river having several bathing beaches with trees to the water's edge.

I spend a good deal of time buying up the riverside cottages and converting them, in my imagination, into sailing bases.

There are at least three boatbuilders at Woodbridge, and I visited the largest one wet morning. A nine-tonner, designed by a doctor for his own use, was being planked, and the keel of a four-tonner had just been laid. Boat building seems to be a particularly humanising art. All the men and boys I spoke to had the stamp of craftsmen and the quiet air of pride and self-sufficiency that goes with craftsmanship in the kindliest of all materials. I find a boat builder's yard very tempting, for to watch your own boat being built must be a most exciting experience. The walls of this builder's office were hung with the beribboned necks of launching champagne bottles, and photographs of the launchees.

The tide is right, there is a good breeze, I must be off.

ABNER

Correspondence

Small House Design

Sir,—I did not expect that I should again bother you with a letter, but I am so heartily in accord with the views expressed by Mr. Lingard in your issue of 2nd Aug. that I cannot refrain.

In my own case, I have only once ventured outside my chosen field. I have never employed an assistant, but made every drawing and detail with my own hand. I have designed in all some 200 individual small houses, ranging in cost from £300 (before 1914) to £1,500 (after 1945). I have lived on professional earnings, and put aside sufficient in the form of investments to continue existing in this more difficult age.

I say this, not boastfully, but feeling perplexed what the fuss is about.

Yours faithfully,

EDWIN GUNN.

The Kennet and Avon Canal

Sir,—Your unsigned article on the Kennet and Avon Canal gives a misleading impression of its potentialities for commercial traffic today. The Canal did not die a natural death through lack of traffic and fair railway competition, as your article implies, but was forced out of business by a ruthless cut-throat trade war with the Great Western Railway Company, which was able to quote uneconomically low freight rates while recouping its losses from passenger traffic. Having bought the Canal in 1852 the G.W.R. made several attempts to close the statutory navigation legally, but failing in this they deliberately discouraged traffic by raising tolls, imposing arbitrary restrictions and systematically neglecting maintenance until the Canal was virtually impassable for loaded barges. When the railways were nationalised this Canal passed with many others almost by accident into the hands of the British Transport Commission, a railway-dominated body which has no interest in developing water transport. Whereas under the G.W.R. the Canal was open but in a state of calculated neglect, the British Transport Commission closed it completely in May, 1950, in admitted disregard of the law, and has obstructed any boats which have attempted to enter it ever since.

The conditions of harsh competition which brought about the decline of the Canal need not exist today, when the full use of all forms of transport is necessary and desirable in the national interest. The Kennet and Avon Canal is the shortest route by water between the large conurbations of London and Bristol, and is built on a scale sufficient for barges of eighty (not sixty) tons burden, a highly economical operating unit. Bulk goods which are at present carried by road could usefully and economically be diverted to water transport, thus relieving the heavy congestion on the roads.

The British Transport Commission's original estimate for the restoration of the canal to good working order was £250,000. This rose to £700,000 in a year as the opposition to closure grew! A leading consulting engineer who

Correspondence *Continued*

was commissioned to carry out a survey for the Kennet and Avon Canal Association estimated the cost at £350,000. This is equivalent to the cost of 1½ miles of new Ministry of Transport road, and may be compared with the £1,112,000,000 that the Commission is preparing to spend on railway modernisation. Already sufficient traffic in quarry-stone, fertilisers and other bulk cargo has been offered to pay the entire annual operating costs of the Canal. Why then is the British Transport Commission preparing to abandon it? Nottingham City Council has recently spent £93,000 on filling in two miles of abandoned canal. The Commission is proposing to abandon 57 miles of canal for other public authorities to deal with in due course at their own expense.

The writer of your article expresses surprise that there should be protests against the proposed closure. What is really surprising is that closure is proposed at all, instead of the Canal's development. The British Transport Commission has shown itself unable or unwilling to develop the nation's waterways in the nation's interest; the next step should be to remove the waterways from its management and transfer them to a National Waterways Conservancy charged with the duty of developing them in all their uses, for commerce, recreation, drainage, water supply and amenity.

Yours etc.,

JOHN McCANN

Coventry Windows

Sir,—I was much interested in your articles on the fine stained glass for Coventry Cathedral now on view in the Victoria and Albert Museum. But I wonder if you would allow me to comment upon some points which Mr. Basil Spence makes in defence of his placing at the windows to face "the wrong way".

1. ("As you go down the nave the windows will reveal themselves on either side and will aid the building up of an emotional climax of feeling as you stand in front of the altar.") With the windows facing away from one, and with the deep internal mullions making frontal viewing essential, it is a strange kind of revelation to be obtained by twisting round head or body and looking behind one as one advances. Surely nothing but discomfort and irritation can result. Even then, you will not see the windows properly (see below).

2. ("After Holy Communion—turning from the Communion Rail—will be one of the few moments when the windows will be seen at the same time. I think this is more important spiritually than placing the windows so they can be easily seen by the seated congregation.") Unless I am mistaken, even this momentary view will be impossible. Even if kneeling at the Communion Rail—let alone standing back a few feet from it—the final two golden windows will be invisible; they are about level with the Rail, are set in sharp perspective, and have those huge mullions obscuring them still further. Then, to see the remaining windows as one walks back to one's seat after Communion is quite impossible unless one stands or saunters with eyes roaming all over the place—scarcely appropriate behaviour at such a moment in the service. How can a lightning glance at parts of eight of the windows in the thirty or so seconds' walk back to one's seat possibly be described as "more important spiritually"?

3. ("Casual visitors can of course examine each window in exactly the same way they would do in an old cathedral.") Surely not. To start with, the windows reach down almost to the floor, which is seldom (if ever) the case with other cathedrals; and this makes it imperative to view them unobstructedly from a distance. I do not think this will be possible, and I should be grateful for Mr. Spence's elucidation. Starting from the altar end, the golden pair of windows (even if you stand in the apse) will be hopelessly obscured by the end of the apse wall, the cluster of organ pipes on the end of the wall, and the tall iron grille surrounding the altar. One might get a better view if standing literally up against the altar itself, but visitors will certainly not be allowed within the Communion rail and on the altar steps.

The deep purple pair and the multi-coloured pair will, if I read the cathedral designs correctly, have their lower parts blocked out by the high choir stalls, except for a small spot or two of floor where one might get a sight of one pair *in toto*. Proper viewing of these four windows would seem to be impossible.

The red and green pairs alone will be readily viewable.

And so it is that these magnificent windows will contribute almost nothing to the mood of the services, or to the worshipper seated in the cathedral before or after a service—for even in the front row of the congregation only four of the ten windows will be visible by twisting round in one's seat—and can only be partially viewed by the peripatetic visitor. Is this not a strange state of affairs for a great Christian cathedral?

Yours etc.,

CUTHBERT EDGE

NEWS

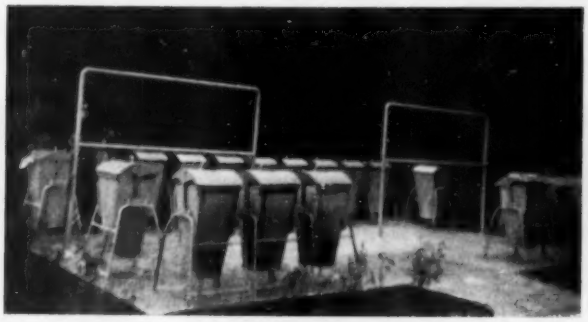
Vienna Congress on Housing and Town Planning.

Vienna, an Architect's city, was never more so than now, when, withered in the fires of war, she is rising again from the ashes. If she is not the Vienna of Johann Strauss, neither is she the Vienna of "The Third Man," as she stands at the crossroads of Europe—on the not so blue Danube—still a gracious and lovely city with spacious streets, glittering shops, magnificent public buildings and intrigue-haunted coffee-houses still weaving their own magic spell.

During the last week of July, Vienna's impressive Town Hall housed the twenty-third International Congress for Housing and Town Planning and, as at the Tower of Babel, speech was in many tongues. Of the large number of delegates who took part, the Germans seemed the most earnest, the Dutch the most practical, the Americans the most long-winded and the Russians the most poorly clad.

The theme of the Congress was "The City and Its Surroundings"; and this was considered by six separate study groups according to its various aspects, "Planning for the Modern City and its Surroundings," "The Rehabilitation of Slum Areas," "Standards for Building Density," etc. The language barrier was breached by individual headphones which could be tuned in to English, French or German interpreters. Thus your correspondent had no difficulty in following the proceedings and came to the conclusion that in Britain we are ahead of the rest of Europe in Planning, but by no means ahead in Housing. In most countries the cry, "There must be a Regional Planning Authority," is still being heard.

The Congress opened with a Plenary Session at which papers on the main theme were read by Rafael Pliçó,



"The refuse bins however commanded universal admiration"

Secretary of the Treasury of Puerto Rico and Professor Franz Schuster of Austria. The rest of the week was devoted to the study groups and the Congress closed with a final Plenary Session at which the reports of the Study Groups were submitted and discussed.

Among highlights of the Congress events were: a memorable evening reception by the Austrian Federal Government at the Schonbrunn Palace, where the wine could have filled the new Danube Canal (a project advocated at the Congress); a Study Tour of the New Vienna and a film show at which films on Housing and Town Planning competed for a challenge cup, a gift from the City Fathers. The films were disappointing as they followed the same pattern—slums and traffic chaos swept away by the magic hand of "Planning." The Study Tour was more rewarding, taking in new housing developments, kindergarten schools, the Ringturm (a twenty-storey office block), a super sports stadium and a particularly attractive scheme of single-storey houses for old people built in a colonnaded terrace on three sides of a central, pleasantly laid-out courtyard. The houses were well built, well equipped, compact and as modern as the hour.

A number of large tenement blocks inspected looked as good as anything in Britain, although there were critical remarks about six-storey flats having no lifts and certain frontal aspects being too plain. The refuse bins, however, commanded universal admiration. They were arranged in neat rows, as in the photograph, each on its own stand; a carpet-beating rail was provided and a brush and shovel for sweeping up spillage. They were set in a paved courtyard surrounded by trees and flower beds and there was not a speck of dust to be seen.

Karl Ehn's Karl Marx Hof of the '30's is still an impressive scheme and might have been built yesterday.

About 100,000 houses were destroyed or damaged in the city in the last six months of the war and about 5,000 new houses per annum have been built in the last ten years. New schools, particularly kindergarten, appear to have kept better pace with new housing developments than in this country and there is no doubt that the municipal authorities are making the most vigorous and determined efforts to restore Vienna to its former greatness.

One ugly edifice should be recorded; a monstrous, red-painted column erected by the Russians, crown with a large red star and dedicated to "The Saviours of Vienna."

D-M.McC

Housing Returns.

The Housing Progress Reports presented to Parliament as White Papers by the Minister of Housing and Local Government and the Secretary of State for Scotland show that the number of permanent houses completed in Great Britain during June was 27,672 compared with 27,187 in June, 1955. In the first six months of 1956, 144,212 permanent houses were completed compared with 155,850 in the same period of 1955.

The Late John B. Perks

We record with deep regret the death, which took place at University College Hospital on August 11, as the result of a cerebral haemorrhage, of Mr. John Bernard Perks, general manager and executive director of *The Builder*. He was 42.

In addition to his work for *The Builder*, John Perks managed "The British Clayworker" and "The Architects' & Builders' Compendium" for companies associated with The Builder, Ltd.

Law and Administration

When the government decided to review the whole of their Housing policy it also decided to embark on a large programme of slum clearance. This decision uncovered a number of difficulties which arise from the procedure relating to slum clearance as established by pre-war legislation. This programme of slum clearance was initiated shortly after the passage of the Housing Repairs and Rents Act, 1954, and has been gaining momentum since that time. This week the Minister of Housing and Local Government stated that

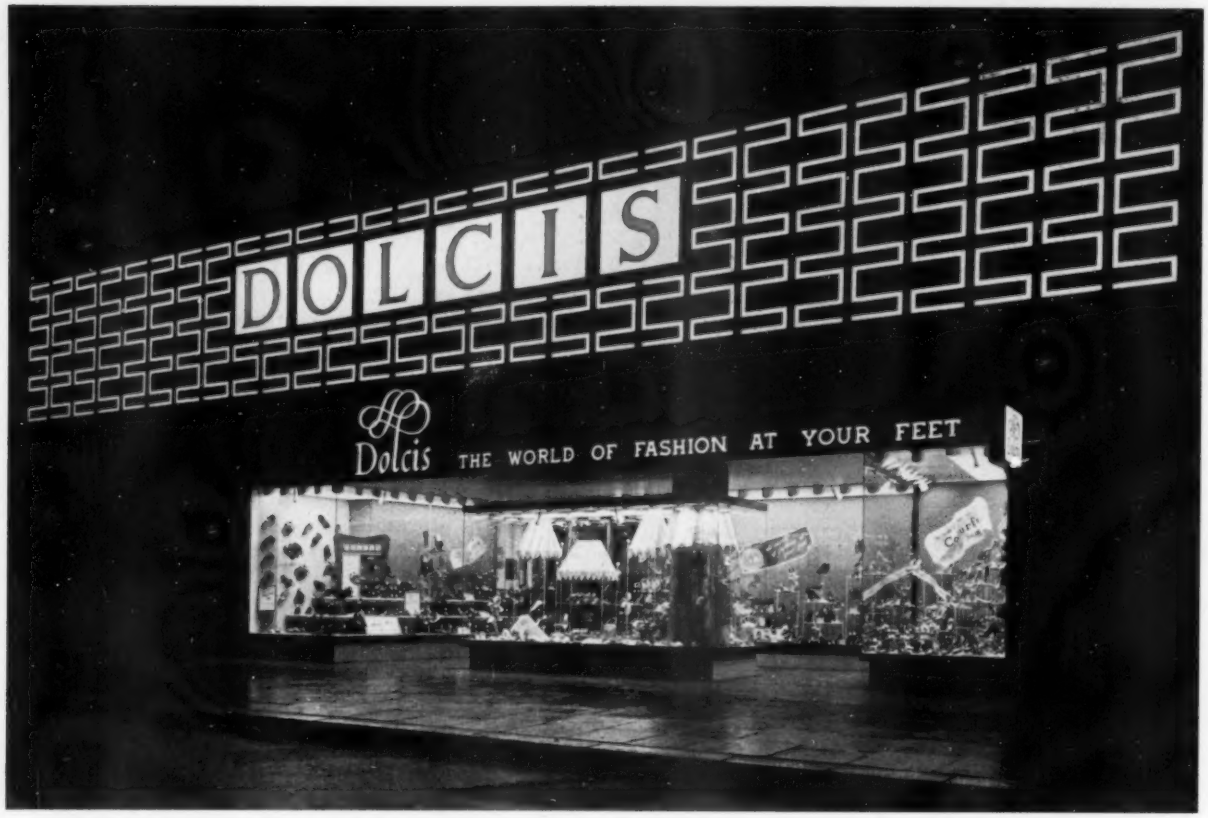
> "More slum clearance orders were submitted . . . in the first half of this year than in the whole of 1955, and the numbers will continue to increase as the work of slum clearance progresses."

Two of the problems which the slum clearance programme has brought to light have been the subject of Circulars issued by the Ministry of Housing and Local Government in the past week. These Circulars deal with compensation and with the procedure for making and confirming slum clearance orders.

Slum Clearance Compensation

It was a feature of compensation under the Housing Act, 1936, that many houses affected by certain types of order were to be purchased at site value only. The Slum Clearance (Compensation) Act, 1956, makes special provision for additional compensation to be paid to the owners of certain classes of house affected by slum clearance. *Circular No.* 43/56 explains the provision of this Act which received the Royal Assent and came into operation on August 2nd, 1956. It also deals with the Housing (Forms of Orders and Notices) (Amendment) Regulations, 1956. Together these provisions affect owner-occupiers who purchased their houses between September 1st, 1939, and December 12th, 1955, and business occupiers with a freehold interest or an appropriate leasehold interest. The new arrangements also provide for increased payments in respect of good maintenance. These good maintenance payments were already a feature of compensation under the Housing Act, 1936, but they are now to be increased in certain circumstances for houses subject to demolition orders or to closing orders in lieu of the making of demolition orders. An Order giving effect to these arrangements is now before Parliament and it provides for the multipliers to be increased to nine times the rateable value of the houses in the case of owners-occupiers, and to four and half times the rateable value in any other case.

The circular has an initial explanatory section and two Appendixes. Appendix I provides a useful set of notes to each of the sections of the 1956 act. Appendix II sets out the action to be taken by Local Authorities to implement the provisions of the 1956 Act with particular reference to the new forms of notices involved.



Another branch of Dolcis Shoe Co. Ltd., in Oxford Street was opened in June—the 48th shoe shop in this busy thoroughfare. It takes the place of Flemings Restaurant. Night view (above) shows perspex faced lettering illuminated by red and white fluorescent tubing. Facade grille (below) is sheet metal and allows light to filter through to first floor offices. Section of grille on right hinges outwards for access in the event of fire.

Shoe Shop

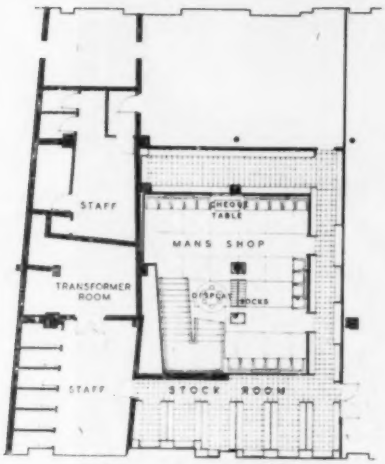
OXFORD STREET

architects:
ELLIS E. SOMAKE
Staff Architect:
Dolcis Shoe Co.,

assistant architect:
Geoffrey Uffindell

general contractor:
Courtney Pope Ltd.

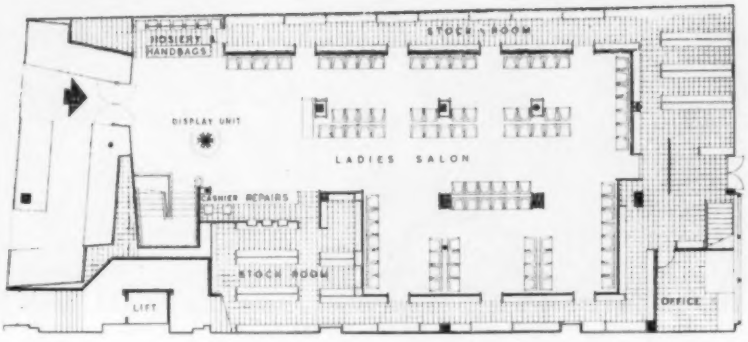
The staircase taken from basement. Back wall, burr walnut and wall (right) elm shiplap. Mosaic floor is two shades of grey with accents in lemon colour. Staircase strings are 6in x 4in channels with red Formica infilling. Balustrade A.P. Glass.



BASEMENT PLAN

Man's shop. Left wall has black hide panels held by cast steel bosses. Far wall elm, and lefthand return in yellow Rydura.

Shoe Shop
Oxford Street



*GROUND FLOOR
SCALE: 1in = 24ft

Ladies Salon. Chairs are black and lime green covered with black cushions. They were designed by the architect.

Ground floor from entrance. Fibrous plaster, coffered ceiling is red, yellow and grey. Colour over forward ceiling area is white and over main saloon beyond, blue. Drapes (white with black and lime figures) were designed by Anne Loosely. Pushplates are bronze trays with tile inserts re-introducing the floor and shopfront grille motif.

Handbag and hosiery bar. Storage unit behind counter bar has pressed metal spars, illuminated with cold cathode. These carry units of 2 drawers for storage.

Counter unit for 2 cashiers with storage space for shoes brought in for repair. The top of the counter also serves as a central wrapping point at time of payment. Counter front top and frieze over are in red and white Formica. Rear wall in grey Lionhide.

THE ARCHITECT and Building News, 23 August 1956

Institute of Pathology

NEWCASTLE GENERAL HOSPITAL

architects:
SCHERRER AND HICK
In collaboration with
P. H. KNIGHTON & W. H. EVANS
architect and engineer to the Newcastle-upon-Tyne Regional Hospital Board

Main Entrance with trolley ramp on left

THE site chosen for the institute of Pathology and Regional Blood Transfusion Centre at Newcastle General Hospital was limited to .95 acres and lies immediately to the south of the Gynaecological Ward and between this Ward and the old Hospital.

The Basement

The planning of the Basement was considered in the light of civil defence requirements and in an emergency blast walls of reinforced brickwork could divide the basement into appropriate areas.

The southern half of the basement is planned for use by the Regional Blood Transfusion Service. This area contains the bottle washing rooms, sterilising apparatus and equipment storage, together with the necessary ancillary rooms.

The Regional Blood Transfusion Service

This Service is planned on the ground floor of the north and west wings to enable it to have ready access to the public and to assist in the receiving and despatching of the Service's fleet of blood carrying vehicles to other hospitals of the Region.

The principal laboratories for the Service are situated on the ground floor on the north side of the corridor of the north wing, while the administrative suite is on the south side of this corridor.

The rooms to which the public would need direct access such as the Blood Donors' Room and Bleeding Room (with a Tea Service room adjoining) were planned as near as possible to the main entrance to the building.

Department of Hospital Pathology

Whilst the major portion of the ground floor accommodates the Regional Blood Transfusion Service, the east section of the south wing of the building is occupied by the Department of Hospital Pathology and includes the Mortuary, Post Mortem Rooms, Students' Gallery, Changing Rooms, Staff Rooms, etc.

First Floor

This floor contains the Historological, Haematological and Bio-Chemical Laboratories, together with the accommodation for Director, General Staff and Secretaries.

The Department receives out-patients for examination, and adjoining the entrance hall are planned the Examination Rooms, Waiting Rooms and offices.

Second Floor

The Public Health Laboratory and Bacteriology Department is situated on the second floor. The ancillary laboratories, such as media preparation, sterilising, and

wash-up rooms, are grouped in the South wing, together with incubator, refrigerator, and store room. Laboratories for routine work are accommodated in the remainder of this block and in part of the West wing. The centre portion of the latter provides administrative offices and at the S.W. corner a library for the use of all three departments in the building. The greater part of the South wing is devoted to laboratories for research, virology, and epidemiology.

Third Floor

The Animal House occupies the third floor and is so planned that the stock rooms and breeding unit, and the rooms for animals under experiment, are placed at opposite ends of the block, the intervening section providing an incinerator, cage sterilising and washing unit, and rooms for inoculation and post-mortem examinations. All the rooms have an asphalt floor falling to a gulley, and in the rooms for inoculated animals the precaution has been taken of connecting each gulley independently to the main drain.

Structure and Services

A reinforced concrete frame and solid reinforced concrete floors.

The bottom storey of the building forms a semi-basement, the retaining walls of which are constructed in solid reinforced concrete with a minimum thickness of 12ins.

The underside of this basement floor is approximately 6ft below the ground level and the foundations for the columns are a further 3ft in depth.

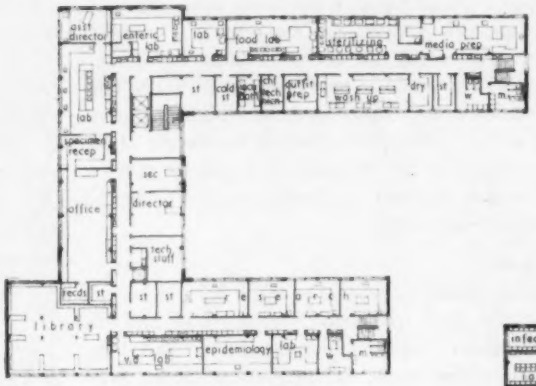
Careful consideration has been given to the method of distributing the services within the building and also to the method of waste disposal. On one side of the central corridors there is a double wall punctured only by doors into the rooms. This double wall forms continuous vertical ducts running from basement to roof level containing all service mains and main drainage. (The spaces not required for ducts have been used for general and coat locker storage). From these duct spaces mains serve each laboratory and no pipes or drainage runs are exposed to view. The pipes are supported in service units behind the laboratory benches and short horizontal drains or other service pipes are in the 6in light-weight floor screed which covers the structural floors in practically all cases.

The Calorifier Room in the basement accommodates the Heating Calorifiers for this building as well as future Heating Calorifiers for the adjacent V.D. Block. H.W. storage cylinders, H.W. Calorifiers and all circulating pumps are also accommodated in this room, and the Calorifiers and Pumps have been duplicated so that standbys are available. The heating as well as the hot water supply are thermostatically controlled and an electric clock with a time switch has been installed to switch off the steam supply during the night-time and at week-ends. This arrangement does not, of course, apply to steam services to equipment or apparatus.

Steam from the main Hospital Boiler House is supplied at a pressure of 100 lbs/sq in and is reduced to whatever pressure is required. A Steam Header has been installed with branches to the different Calorifiers

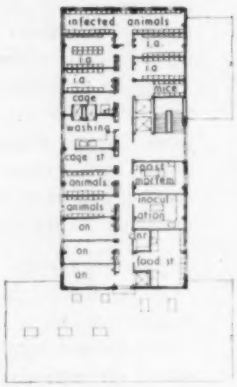
Continued on page 261

FIRST FLOOR



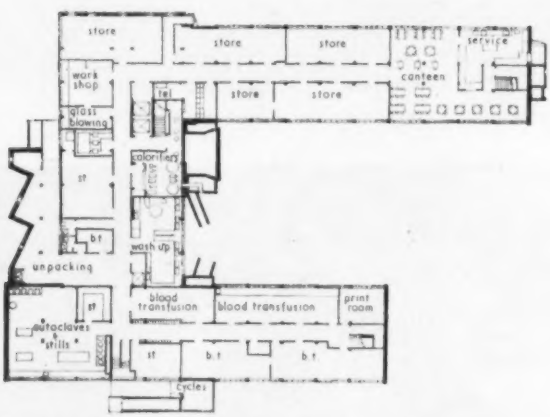
SECOND FLOOR

Institute of Pathology

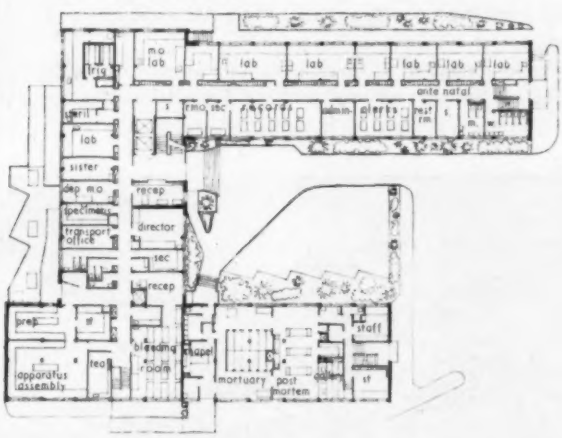


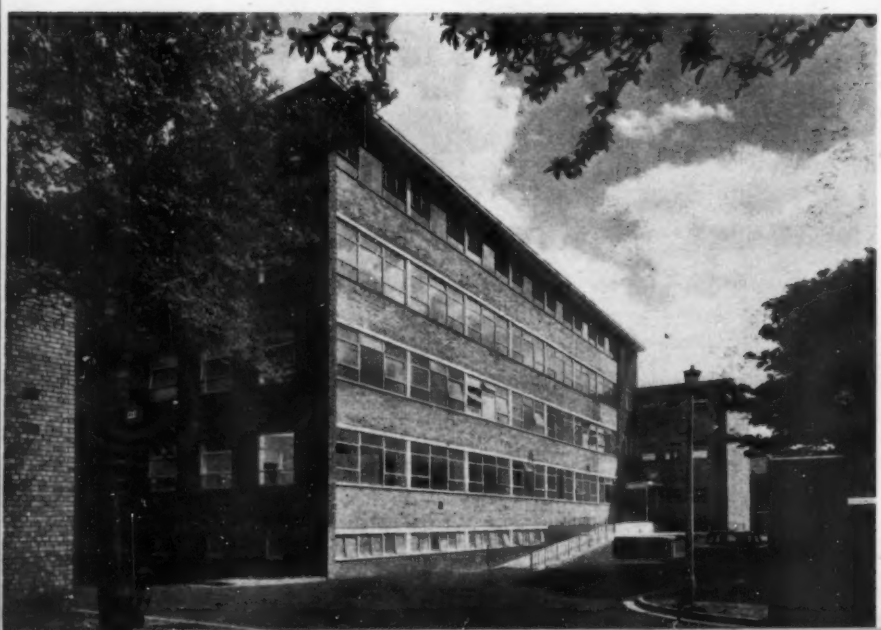
THIRD FLOOR

BASEMENT



GROUND FLOOR





consultants

structural:

ANDREWS, KENT & STONE

electrical:

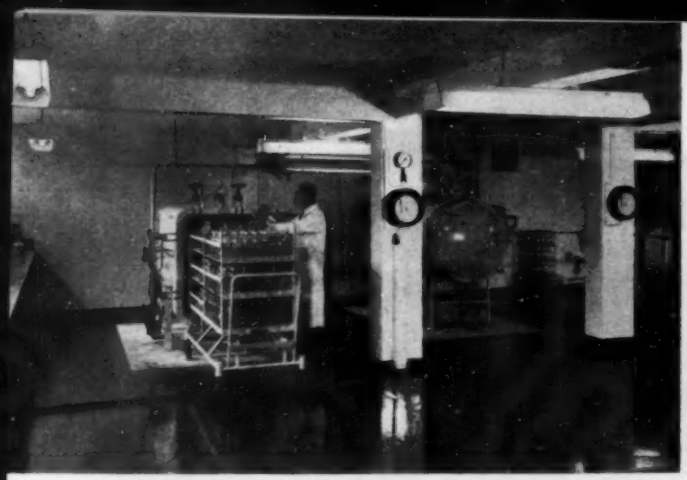
BARLOW, LESLIE & PARTNERS

heating:

JOHN PORGES

quantity surveyors:

RIDER, HUNT & PARTNERS



From left, above: High pressure sterilizer in autoclave room; sterilizing room, public health laboratory service. From left, below: Ante-natal grouping laboratories; pathology department, bio-chemical laboratory.

Continued from page 255

and Steam Consumers. The condensed water from the Calorifier discharges into a Receiver and before being returned to the Boiler House it is cooled down, pre-heating the cold water supply to the hot water storage cylinders, thus achieving the highest efficiency. Steam is supplied to the Sterilisers and Autoclaves and other apparatus.

Laboratory Furniture

The laboratory furniture was specially designed by the Architects in consultation with the Directors of each Department. The laboratory benching in the case of the Departments of Pathology and Blood Transfusion are basically 2ft 6ins wide and 3ft high, while the bench runs for the Public Health Department are 2ft 9ins wide and 2ft 9in high.

Under the bench runs there are underbench cupboard and drawer units which are all interchangeable within each Department.

The bench tops, service casing tops are in Burma Teak, while the bench framing and legs exposed to view and bench top skirtings and upstands at the back of bench tops to service pipe casings are in African Mahogany. The tops, sides of underbench drawers and underbench cupboard units, fronts and sides of drawers and certain other cupboards, and fume chambers are also in African Mahogany.

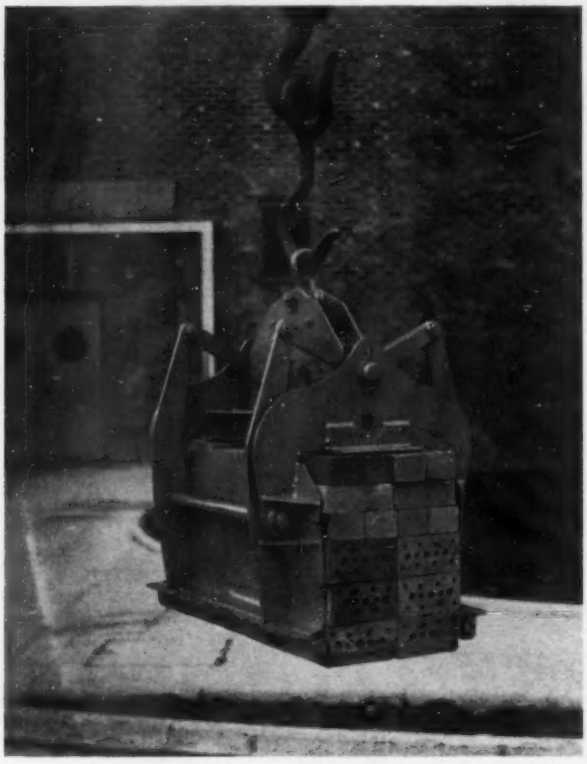
General Contractor: JOHN LAING AND SON LTD.

Subcontractors:

Air Control Installation: Air Control Installations Ltd. *Balustrading to Staircase*: M. Aynsley & Sons Ltd. *Blinds*: Henry Moat & Son Ltd. *Bricks (Facing)*: Pratt (Watford) Ltd. *Bottle Washing Machine*: Miller Hydro Co. Ltd. *Cage Racks*: M. Aynsley & Sons Ltd. *Canopies (Glazed)*: Luxfer Ltd. *Canteen Equipment*: Radiation Ltd. *Cast Stonework*: Northern Cast Stone Co. Ltd. *Doors (Flush)*: F. Hills & Sons Ltd. *Duct Covers*: Granwood Flooring Co. Ltd. *Floors*: Bells Asphalte Co. (Mastic Asphalte) Granwood Flooring Co. Ltd., A. MacDougall & Sons Ltd. (CorkTile) *Flooring (Linoleum Tile)*: R. J. Morpeth Contracts Ltd. *Electrical Installation*: Drake & Gorham Ltd., Gent & Co. Ltd. *Fire Hose Reels*: John Taylor Dunford Co. Ltd. *Furniture and Fittings to Laboratory*: Griffin & George (Laboratory Construction). *Gas Fitting*: D. Thomson & Sons Ltd. *Gas Fired Incinerator*: Heenan & Froude Ltd. *Glazing*: James Thow Ltd. *Heating & Hot Water Installation*: G. N. Haden & Sons Ltd. *Ironmongery*: N. F. Ramsay & Co. Ltd. *Joinery*: James Hustler & Son Ltd. *Lettering*: N. F. Ramsay & Co. Ltd. *Lifts*: Evans Lifts Ltd. *Lighting Fittings*: Hartley Electromotives Ltd., Philips Electrical Ltd. *Mortuary Equipment*: The Ritchie Refrigeration Co. *Paints*: Hadfields (Merton) Ltd. *Painting*: Reid Bros. *Paving and Partitions (Terrazzo)*: Toffolo Jackson & Co. Ltd. *Plastering*: G. W. Dixon (Gateshead) Ltd. *Plumbing*: D. Thomson & Sons Ltd. *Railings (External)*: M. Aynsley & Sons Ltd. *Refrigeration Plant*: H. C. Troldahl Ltd. *Roofing (Asphalte)*: Bells Asphalte Co. *Roof Lights*: Doodson & Bain Ltd. *Sand & Gravel*: Redmire Sand & Gravel Co. *Sanitary Fittings & Sterilizers*: Dent & Hellyer Ltd. *Sterilizing Chests*: Perkins (Clean Milk Equipment) Ltd. *Tanking*: Bells Asphalte Co. *Tiling (Wall)* : H. Sweet Ltd. *Telephone Equipment*: Communication Systems Ltd. Telephone Rentals Ltd. *Ventilation Plant and Equipment*: Fenton Byrn & Co. Ltd. *Wall Finishes*: Modern Surfaces Ltd. *Weighing Machine*: W. & T. Avery Ltd. *Windows (Metal)*: Doodson & Bain Ltd.

Contractors Plant IV

THIS article is concerned with cranes and hoists which are used in various building operations. The next article in this monthly series will cover domestic windows.



Cranes and Hoists

by W. T. SCOPES *M.I.E.I M.I.PLANT.E.*

ALL through the ages material and heavy objects have had to be moved from one place to another and with the advancement of the mechanical age, this has developed into a science. Pre-mechanical days blocks and falls were the main method of lifting and if the working of these is understood the mechanism of a crane is very simple. Assume that there is a four and three block in operation, which means that a weight very much heavier than the strength applied to the rope can be lifted and it follows that if the strength on the rope is replaced by power and the wheels replaced by gears we have our present day crane.

A wide variety of cranes are required for the Building Industry and these can be divided into the following classes:—

1. *The Light Portable Crane.* This includes the small light crane that can be attached to scaffolding and the crane that lifts up to 15 cwt.
2. *The Mobile Crane*
3. *The Loco Crane*
4. *Derrick Crane*
5. *Tower and Guy Derrick Cranes.*

The Light Portable Crane

Fig. 1 shows a crane of this type which can be fitted with varying lengths of jibs up to 20ft and lifts a maximum load of 15 cwts. They can be fitted with pneumatic or solid wheels, are mechanically slewed but have to be manhandled when being moved from one point to another on the site. The maximum outreach of these cranes is 19ft when the load that can be lifted is 3 cwts.

For working in confined spaces this crane is very useful as the tail swing is very small. The hoisting speed is around 80ft per minute. The Scaffold Crane which lifts up to 5 cwts is in reality only a mechanical hoist with a very short jib, but is extremely useful for hoisting material from ground to top level.

Mobile Cranes

These fall within three classes namely:—

1. Fully Mobile—Full Slewing
2. Fully Mobile—Non Slewing
3. Lorry Mounted Mobile Full Slewing.

Fully Mobile—Full Slewing Cranes

Fig. 2 is a typical example of this type of crane the lifting capacity of which ranges from 2 to 6 tons. For general use on Contractor's work the 2/3 ton crane is used and is usually diesel driven, fitted with a lattice jib of 25/35ft. Fig. 3 shows the different radii and loads that can be operated with this type of crane. The problem of precision lowering has been given careful consideration by the makers who have evolved a system whereby a high standard of precision lowering has been attained. It is of the utmost importance to have this facility when placing timber or steel work as for both jobs "inching" is very important.

Above: 130 brick capacity self dumping toggle operated brick grapple, by Priestman Bros. Ltd.

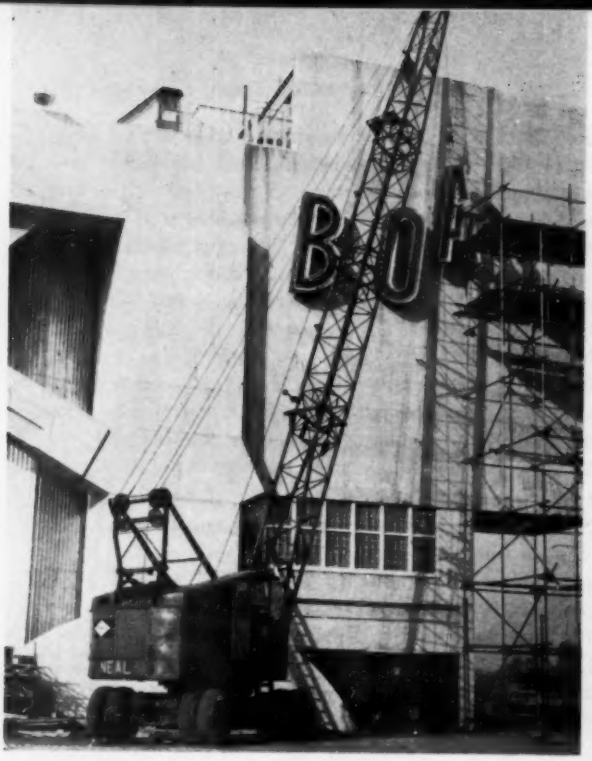


Fig. 2

Fig. 1

Jib lengths vary from 20 to 50 feet but in nearly all cases short jibs can be extended to longer ones by adding centre sections, the advantage being that the same jib foot and head are used. The style of the jibs vary in the following ways:—Channel, Lattice, Swan Neck and Hammer-head. The Channel and Lattice jibs are usually used for normal work (it is not recommended that the Channel jib should be lengthened), while the Swan Neck is attached to a Lattice jib and this allows more headroom at the jib head and does not decrease the lifting height. The Hammer-head jib is normally attached to the Channel jib allowing for the handling of bulk swinging loads.

Under this heading must be considered the Diesel/Electric Cranes. These have a generator driven by the lorry engine and all operations except travelling are electrically controlled. There is a type of crane under this category that has all its operations controlled electrically. As all operations are controlled by a separate electrical circuit, it is in theory possible to do all operations at one time, but in practice only two of the four can be carried out at the same time, owing to the fact that a man has only two hands and as soon as he releases the pressure on the controller handle it springs back to neutral. This type of crane is very easy to operate and the skill required is not the same as that required to operate other types. A Cantilever jib of lengths up to 40 feet is fitted and this has the advantage of low headroom. These cranes are fitted with an overrun switch, and if the operator takes the load too high the electrical circuit is immediately broken, the hoisting stopped and the brakes applied.

SAFE WORKING LOADS	STRAIGHT LATTICE JIB 25' 0"		STRAIGHT LATTICE JIB 30' 0"		STRAIGHT LATTICE JIB 35' 0"	
British Rating	Radius	Height of Lift	Radius	Height of Lift	Radius	Height of Lift
3 tons	10' 6"	22' 6"	10' 6"	26' 6"	—	—
2 tons	14' 0"	21' 6"	14' 0"	27' 0"	13' 6"	31' 6"
1½ tons	17' 6"	20' 6"	17' 0"	26' 3"	16' 6"	31' 6"
1 ton	23' 0"	16' 0"	22' 6"	24' 0"	21' 6"	30' 0"
½ ton	25' 0"	13' 0"	26' 6"	19' 9"	25' 6"	28' 0"
¼ ton	—	—	30' 0"	14' 6"	32' 0"	21' 0"

Fig. 3

Fully Mobile — Non Slewing Crane

This type of crane shows to best advantage where it is working on hard level ground, such as a concrete floor, as owing to its construction, the method of slewing is by the castor wheel at the rear. The motive power is Diesel/Electric and the action of the controls is the same as stated above, under full circle slewing cranes. The normal length of jib is under 25 feet. The disadvantage of this type of crane is that mobility is very restricted on soft ground.

Lorry Mounted Full Slewing Cranes

Fig. 4 is a good example of this type of machine and perhaps this unit is the most economical for any building contractor to purchase, there being no transport charges when moving it from one site to another. Both types of full slewing crane already mentioned can be lorry mounted with the same duties. In this section of cranes the lifting loads go up to 15 tons when fitted with a 30ft jib, but the same machine with greatly

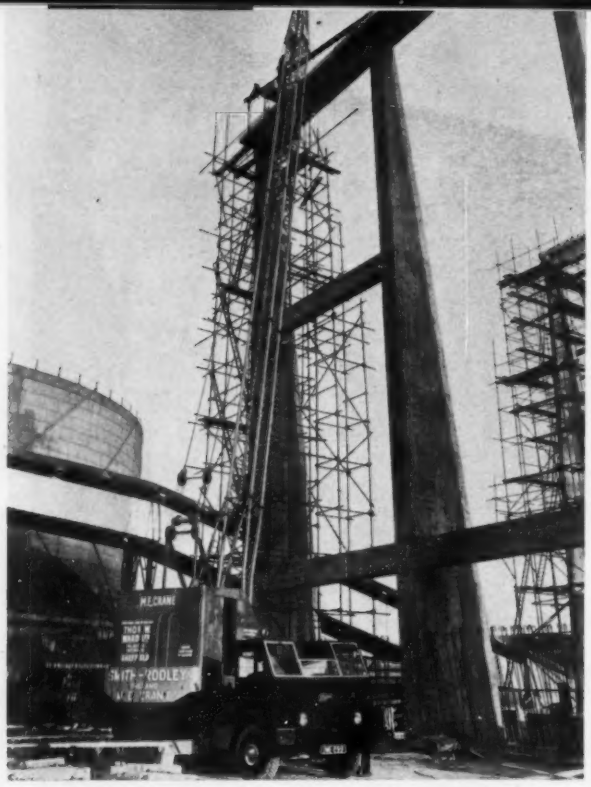


Fig. 4

reduced lifting capacity can be fitted with a jib 100 feet long (this is done by adding centre sections). The outstanding advantage of this long jib is that it is capable of placing steel and roofing material to a great height and as materials at this height are never very heavy the 3 ton limit load is quite capable of carrying out any such duties. The disadvantage of this type is that to move the crane from one place on the site to another the driver has to leave the crane control cab and operate in the driver's cab. This is a little awkward when travelling with a load.

The Excavator as a Mobile Crane

Excavators cannot be left out of the category of mobile cranes as all sizes can be operated as a mobile crane. They have a distinct advantage over the conventional mobile crane in that they will operate and manoeuvre with greater ease and safety on very soft ground, but a machine fitted with tracks is not meant to run around a site in the same way as a pneumatically tyred machine.

An excavator is a machine originally made to dig muck and the crane operation is an additional duty, therefore the gearing, clutches and brakes are constructed for digging. The clutches are of the toggle type (that is in the smaller size of excavator that would generally be used on a building site) which means that they are either in or out, there being no halfway operation, which combined with the speed of the gears makes the excavator a machine that has to be operated with great care when being used as a crane. The answer to this problem is that excavators should be fitted with fluid-flywheels when ever a machine is sold as a universal machine. It is said that a fluid-flywheel fitted to an excavator restricts the power when acting as a digger and this fact must be conceded, but the advantage of limitation of the power is amply repaid by the saving in excessive strain on the machinery as well as the ropes. Speaking from over 20 years' experience of operating excavators with this attachment, maintenance and wire rope replacements have been far less than the same make and size of machine not fitted with a fluid-flywheel. The degree of control that can be obtained when operating an excavator as a crane fitted with a fluid-flywheel is remarkable. When placing steel and timber into position "inching" is essential and this cannot be obtained unless the machine is so fitted.

The Loco Crane

This type of crane takes its name from the fact that it runs on rails the same as a locomotive, and is made in many sizes both as to load capacity as well as gauge. The normal gauge of a crane is 4ft 8½ins but this can be anything between 3ft 6ins to 7ft 0ins. The usual sizes used on building works are 1½/2, 3, 5 tons, with jib lengths varying from 20ft on the light crane to 45ft on the 5 ton.

The track is a most important component to a loco crane and more important still is that the right poundage rail is used for a certain size crane. The lighter cranes up to 2 tons can run on 56 lb rail but the heavier ones must work on 75 lb rail. Another point of importance is the spacing of the sleepers which on no account should be at more than 3 feet centres. There should be no cross fall on the tracks as this will turn a crane over quicker than anything; the centre of gravity of the crane being altered.

Derrick Cranes

These can be divided into two classes namely Stiff legged Derricks and Guy Derricks. The former will operate through 270 degrees while the latter operates through 360 degrees. They are manufactured in varying sizes from 1 to 20 tons with jib lengths from 25 to 150 ft. The largest derrick used on building operations is 7 tons with 120ft jib.

The main feature of the present day stiff legged derricks is that they are level luffing which means that when the jib is hoisted, the gearing is so arranged that the load remains the same distance from the ground. The same applies when lowering the jib. This saves a lot of time in stopping the hoisting of the jib to lower the load, otherwise if it is a bulky load it would hit against the jib as the jib is taken to a vertical position.

When erecting a derrick, proper pads must be put down for the Kingpost and the ends of the sills. A few sleepers or a piece of rough concrete will not do. It must be a pad that will take the pressure applied to it and given below are the pressures in tons:—

Lifting Capacity	*Downward* pressure of Kingpost	Weight of ballast on each leg
5	34	15
7	41	21

The important thing as far as safety goes with a der-

rick is the way that it is tied or weighted down. This should be done by very experienced people and it is always best to add an extra ton or two on each leg, as the suction when a skip is picked off the bottom, if it is wet, is an unknown quantity.

Guy Derrick

This consists of a mast and jib only, the mast being guyed from a mushroom at the top of eight points round the site. The jib is usually 10ft shorter than the mast, the reason being that it has to be hoisted to the mast for the purpose of slewing. The advantage of this type of crane is that it can lift itself up from one floor level to another. The motive power is from a winch standing apart from the mast and the signalling operation to the driver is sometimes a little tricky.

The Tower Crane (Mobile)

This make of crane is an addition to the mechanical plant used in the Building Industry and is being built and developed primarily for use on the larger building sites. The limit of lifting capacity is 3½ tons and this is general in all the makes but the differences occur in height of lift and radii. The main feature of this type of machine is that it is self erecting and one English maker goes as far as to provide pneumatic wheels, which can be fitted to the crane base for transporting from one site to another, thereby cutting out special transport. There are two different jibs available, namely the luffing/crab jib and the straight luffing jib. In the former a crab or trolley run along the jib which is kept horizontal, but if special height is required the trolley can be anchored at the jib foot and the jib used as an ordinary luffing jib. The straight jib can be used as any other derrick jib. These units can negotiate curves with an inside radius of 13 feet. The horse power required is as follows.—Hoisting 15, Luffing 10, Travel 4 and Slewing 2. Where a trolley operates, the slewing motor runs it in and out. Hoisting speeds vary from 130ft min high speed to 60ft min low speed. The jib can be raised from horizontal to maximum elevation in 40 seconds. Care must be taken with this type of crane that they do not work inside their minimum radius. A safety measure applied to one make of crane is that current is taken in at 415 volts and is immediately transformed to 50 volts with centre earth, which means that the most that the operator can come into contact with on his control levers and limit switch is 25 volts. A safety switch arrangement is fitted to stop overloading.

Hoists

Hoists used in the building industry come under three different types, namely Portable, Cantilever Platforms and Centre Slung Platforms. The winches are all of the friction type and can have either petrol, diesel or electric motive power. The lifting capacity varies from 5 cwts to 30 cwts.

Portable Hoists

The principles of operation of all this type of hoist are very similar, although different makers do the same operation in a slightly different way. The average lifting capacity is 5 to 7 cwts (there are a few that lift up to 10 cwts). The tower which is constructed in a box formation is supported by strong back and diagonal braces and up to a height of 20 feet it is self-supporting, but it can be lengthened up to 100 feet providing that it is held back to some firm structure. All these towers have their base on a common base with the chassis of the hoist, so that the hoist rope travels vertically to the head pulley. In one make the hoist is set back from the foot of the tower a foot or so and in this case the rope runs over a pulley at the bottom of the tower, but this pulley must be able to ramble so as to get a direct run on to the drum.

The platform is of the cantilever type and in it is accommodated the emergency brake required by the Factory Act. When the hoist is in operation it must have the four jacks screwed down so as to get a four point bearing of the chassis. It is important to see that the chassis is level both ways. The operation is by pull rope and the levers are so constructed that as soon as the weight on the rope is released the brake comes on.

Static Hoists. Cantilever Type

This is a heavier built unit than the portable and consequently the load capable of being lifted is greater. The loads range from 5 cwts to 30 cwts. The speed of hoisting is 120 feet per minute. The construction of the tower is similar to the portables but as the loads increase so does the size of the angles used as well as the section of the tower.

In this case the hoist usually stands back from the bottom of the tower and a good rule is never to have it nearer than 15ft, which allows the rope to wind on to the drum in the correct way. A shorter distance than this causes the rope to ride on itself and this has a very damaging effect on the life of the rope. Sometimes there is not sufficient room to accommodate the hoist thus and the next best thing is to put it at the bottom of the tower. Care must be taken to see that the upward rope does not foul the binder and this can be achieved by fitting a roller at the bottom of the tower, standing off sufficiently to keep the rope off the binders.

These hoists can be fitted with automatic tipping arrangements when a skip replaces the deck platform and this is particularly useful when the hoist is being used for concreting.

Centre Slung Platforms

This is the type of hoist used for the longer job, the reason being that the erection is more costly but this is soon offset by the extra load capacity. The disadvantage of these hoists is that the platform has only two entrances, whereas the cantilever platform can be loaded from any one of three sides. The difference in this class of unit is that a square framing has to be built to which are attached the runners for the platform to slide up and down. On the top of this structure must be fitted a cathead, the centre wheel leading the rope down

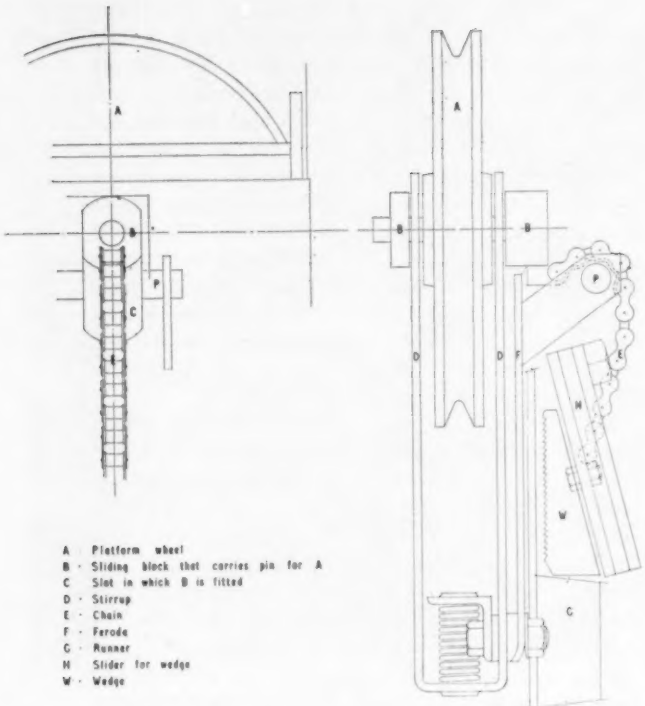

A · Platform wheel
B · Sliding block that carries pin for A
C · Slot in which B is fitted
D · Stirrup
E · Chain
F · Ferodo
G · Runner
H · Slider for wedge
W · Wedge

Fig. 5

to the hoist while the outer wheel leads the rope to the bottom pulley hence to the hoist. The platform size is larger than that used on other types.

Operation of the Winch

Power is transmitted from the prime via the tail shaft, chains and sprockets to the friction shaft which is held rigidly in bearings. The drum, to which is attached the drum friction wheel, runs in floating bearings and forward of the drum are the brake shoes. Fixed firmly to the end of the drum shaft is a lever at the end of which is a heavy counterweight. The control rope is attached to this lever and when pulled, moves the drum over so that the drum friction wheel comes into contact with the friction pulley on the friction shaft and consequently the drum is rotated and the rope wound on. As soon as the tension on the rope is relaxed the counterweight on the lever forces top lever to its bottom position, carrying the drum hard on to the brakes. To lower, the drum has to be held in a position between the brakes and the friction shaft, in other words the drum has to be held free.

Safety Gears

Under the Building Regulations certain safety precautions have to be taken. The arrangements made by the makers comply with these regulations and providing they are maintained and not interfered with they will prevent accidents.

The Over-run Stop

This is a device to stop the drum winding should the driver go too near to the head of the tower. The action is that a spring clip placed between the pull rope and the lever attached to the drum is broken, with the result that the drum is thrown from the friction shaft to the brake shaft. It is essential that this stop should be fitted at least 6 feet from the head pulley.

Platform Holding Device

Fig. 5 shows a typical safety gear fitted to the cantilever type of platform and the method of operation is as follows:—

With the rope lifting the platform, wheel "A" and block "B" are at the top of the slot "C" while wedge "W" is held off runner "G" by its own weight. As soon as the rope becomes slack on the wheel "A" (such as when the rope breaks or the anchorage becomes undone) the wheel "A" and block "B" are pulled down the slot "C" by the spring at the bottom of the stirrup. The downward movement of block "B" causes the chain to move round the pin and pull wedge "W" into contact with the runner "G". The runner is now gripped between the serrated face of the wedge and the ferodo which is attached to the back of the platform uprights, so that a very tight gripping action takes place. The normal stopping distance of a loaded platform is 4ft.

The safety gear is meant to operate and attention should be given to see that the wedge will operate and is not prevented from doing so by a piece of stone or other foreign matter.

Gates

The Building Regulations require that a hoistway shall be enclosed and that all entrances and exits shall be provided with gates. It is further necessary for these gates to be kept shut when the platform is not at that level. There is a device on the market that prevents a gate from being opened until the platform is at the gate level and will not allow the hoist to operate until all gates are closed.

Crane Hoists

This useful little unit is a small capacity hoist with a short jib. Its main purpose is for hoisting light weights for landing on a scaffold, and it is constructed to be fastened on to a scaffold tube. Before operating the hoist make sure that the scaffold tube on which the hoist is to work is rigidly fixed three ways. The speed of hoist depends on whether the machine is reeved for single or double line, and this varies according to load. The speeds are around 170ft/min with a load of 1 cwt down to a speed of 30 ft/min when 4 cwts is being lifted (this load is when the crane is reeved for two fall and the H.P. of the prime mover is increased).

Too much emphasis cannot be laid on the fact that providing these little cranes are kept within their limitations they are an excellent job and perfectly safe, but if they are over stressed and overloaded trouble will soon ensue.

Firms Mentioned in this Article

A. C. E. MACHINERY LTD.,
Porden Road, Brixton, London, S.W.2. Brixton 3293.

AABACAS ENGINEERING CO., LTD.
Birkenhead. Birkenhead 4747.

ABELSON & CO. (ENGINEERS) LTD.,
Coventry Road, Sheldon, Birmingham, 26. Sheldon 2424.

ACROW (ENGINEERS) LTD.,
South Wharf, Paddington, London, W.2. Ambassador 3456.

J. ALLEN & SONS (OXFORD) LTD.,
Cowley, Oxford. Oxford 77155/7.

BLAW KNOX LTD.,
94, Brompton Road, London, S.W.3. Kensington 5151.

JOSEPH BOOTH & BROS.,
Union Crane Works, Rodley, Leeds. Pudsey 3168.

BRITISH HOIST & CRANE CO. LTD.
Compton, Berkshire. Compton 12.

CHASESIDE ENGINEERING CO. LTD.,
Station Works, Hertford. Hertford 3113.

THE GEORGE COHEN 600 GROUP,
Broadway Chambers, London, W.6. Riverside 4141.

COUNTY COMMERCIAL CARS LTD.
Fleet, Aldershot, Hants. Fleet 1155.

FELCO HOISTS LTD.
29 Cromwell Road, South Kensington, London, S.W.7. Kensington 7401.

RICHARD C. GIBBINS & CO. LTD.
Berkley Street, Birmingham, 1. Midland 6183/4.

JOHN M. HENDERSON & CO. LTD.
King's Works, Aberdeen, P.O. Box Vo. 26. *Aberdeen* 24262.

K. & L. STEELFOUNDERS & ENGINEERS LTD.,
Letchworth, Herts. Letchworth 1360.

HERBERT MORRIS & CO. LTD.,
P.O. Box 7, *Loughborough* 3123 *Loughborough.*

F. MYERS TRACTOR & EQUIPMENT CO.,
4 Tilney Street, Park Lane, London, W.1. Grosvenor 7233.

R. H. NEAL & CO. LTD.,
Plant House, Ealing, London, W.5. Ealing 3171.

NEWTON CHAMBERS & CO. LTD.,
Thorncliffe, Near Sheffield. Ecclesfield 3171.

JACK OLDING & CO. LTD.,
Hatfield, Herts. Hatfield 2333.

PRIESTMAN BROS. LTD.,
Holderness Engineering Works, Hull. Hull 31777.

RANSOMES & RAPIER LTD.
Waterside Works, Ipswich, Suffolk. Ipswich 2143.

REED CRANE & HOIST CO. LTD.,
Lodge Causeway, Fishponds, Bristol. Bristol 53237/8.

RUSTON-BUCYRUS LTD.,
Excavator Works, Lincoln. Lincoln 640 & 11197.

THOMAS SMITH & SONS (RODLEY) LTD.
Crane and Excavator Works, Rodley, Leeds. Pudsey 2844.

SHEEPBRIDGE ENGINEERING LTD.
Sheepbridge Works, Chesterfield. Chesterfield 5471.

STEELS ENGINEERING PRODUCTS LTD.,
Crown Works, Sunderland. Sunderland 56281.

WHARTON CRANE & HOIST CO. LTD.
Station Road, Reddish, near Stockport, Cheshire. Heaton Moor 2227

WICKHAM ENGINEERING CO. LTD.
Dashwood House, Old Broad Street, London, E.C.2. London Wall 1191.

Approximate Rates of Hire per 44 hour Week

Mobile Road Cranes							
Petrol or diesel	1 ton	£17	10	0	2 ton	£22	0	0
(capacities at 10 ft radius)	2/4 tons	£27	0	0	4/6 tons	£45	0	0
	6/10 tons	£100	0	0				
Steam Loco Cranes								
(Standard gauge)	3 tons	£12	10	0	5 tons	£17	10	0
	7 tons	£25	0	0	10 tons	£29	15	0
Derrick Cranes								
Hand type	1½ tons (60′ Jib)	£6	0	0	2 tons (60′)	£6	10	0
(extra for bogies & slew gear)	3 tons (60′)	£8	15	0	3 tons (61/70′)	£9	10	0
	5 tons (60′)	£10	10	0	5 tons (61/70′)	£12	5	0
Hand/electric type	3 tons (up to 70′)	£14	0	0	5 tons (up to 70′)	£16	17	6
All electric type	3 tons (80′)	£18	15	0	5 tons (80′)	£22	10	0
	3 tons (81/100)′	£21	0	0	5 tons (81/100′)	£25	15	0
(Indicators and bogies extra)	3 tons (101/120′)	£23	10	0	5 tons (101/120′)	£28	0	0
	7 tons (80′)	£25	0	0	10 tons (80′)	£32	0	0
	7 tons (81/100′)	£29	10	0	10 tons (81/100′)	£36	0	0
	7 tons (101/120′)	£33	0	0	10 tons (101/120′)	£40	0	0
	15 tons (80′)	£45	0	0				
	15 tons (81/101′)	£47	0	0				
	15 tons (101/120′)	£52	0	0				

Hoists (Platform, Tower type)	*Single barrow complete with guide rail, steel wire rope and controls*			
	Standard 5/10 cwt.	Electric motor 6 h.p.	£3	15 0
		Petrol Engine 5/6 h.p.	£3	17 6
		,, ,, 5 h.p., Lister	£4	0 0
		,, ,, 6/7 h.p.	£4	2 6
		Diesel ,, 5/6 h.p.	£4	15 0
	Two barrows as above.			
	Standard 10/15 cwt.	Electric motor 10/12 h.p.	£5	0 0
		Petrol engine 10/12 h.p.	£5	15 0
		Diesel ,, 10/12 h.p.	£7	0 0
	Standard 20/30 cwt.	Electric motor 20 h.p.	£7	15 0
		Diesel engine 16/18 h.p.	£8	15 0
	Standard 40/50 cwt.	Electric motor 20 h.p.	£8	10 0
		Diesel engine 16/18 h.p.	£9	10 0

MOBILE CRANES

KEY A—maximum load in tons. B—maximum height in feet. C—minimum radius in feet. D—maximum radius in feet. E—minimum height in feet F—Load in tons at maximum radius. K—Standard. L—Short extension. M—Long extension. N—Medium extension.

Supplier	Model	Key	Jib Lengths									
JOHN ALLEN & SONS (OXFORD) LTD.	Super Duty Mobile Excavator—K	Jib	25′									
		A	5½									
		B	28									
		C	10									
		D	20									
		E	22.5									
		F	1									
BLAW KNOX LTD.	BK—Fifty	Jib	30′	35′	40′	45′	50′	60′	70′			
		A	5.50	5.46	5.42	5.38	5.34					
		B	33	38	43.8	48.6	52.5					
		C	10	11.2	12.5	13.8	15.2					
		D	32.2	37.2	42.2	45.2	52.2					
		E	19.6	22.2	24.8	27.4	29.8					
		F	1.21	1.17	1.13	1.08	1.04					
K. & L. STEELFOUNDERS & ENGINEERS LTD.	KL 33	Jib	16.75′	20′								
		A	3.0	3.0								
		B	18	17								
		C	7.5	7.5								
		D	15.5	19								
		E	11	12								
		F	1	0.75								
	KL 44	Jib	24′	30′	40′	50′						
		A	4	3	1.75	1.25						
		B	21.75	28.25	40.25	50						
		C	8	10.5	14	16						
		D	24	30	41	43						
		E	12.25	13.75	14.25	31.75						
		F	0.9	0.6	0.25	0.2						
	KL 66	Jib	20′	25′	30′	40′	50′	60′	65′			
		A	6	6	6	3	2	1.5	1			
		B	19.5	23	27.5	39.5	50.5	60.25	64.5			
		C	10	10	10	13	16	18.5	20			
		D	20	24	30	40	50	55	47			
		E	12	15	14.5	18	20.25	32.5	50.25			
		F	2	1.5	1	0.5	0.25	0.25	0.25			
	KL 75 + = with 9′ 6″ Jurymast	Jib	25′	45′	45′+	65′	65′+					
		A	7.5	3.5	1	1.75	1					
		B	22.5	45.5	51.25	64.75	72.25					
		C	10	16	28	20	29.5					
		D	24	40	40	47	47					
		E	14.25	28.5	43	50.5	63					
		F	2.25	1	1	0.5	0.5					
HERBERT MORRIS LTD.	M.60 (Col 1) M.100 (Col 2) M.120 (Col 3)	Jib	21′	21′	21′							
		A	3	6	6							
		B	20.25	21.0	20.75							
		C	10	8	10							
		D	22	22	22							
		E	8.58	9.92	10							
		F	1	1.5	1.5							
FRED MYERS TRACTOR & EQUIPMENT CO.	Hyster Karry Krane	Jib	9.67′	9′	8′	7′	6′	5′	4′			
		A	4.46	4.46	4.46	4.46	4.46	4.46	4.46			
		B	19.33	18.75	17.83	16.92	16.08	15.17	14.25			
		C	2.33	2.17	1.83	1.58	1.33	1.08	0.75			
		D	9.67	9	8	7	6	5	4			
		E	7.67	7.67	7.67	7.67	7.67	7.67	7.67			
		F	1.79	1.88	2.1	2.32	2.63	2.68	2.68			

Mobile Cranes

1. *"Wolf" excavator, by Priestman Bros. Ltd. with crane/dragline equipment, laying concrete slabs.*

2. *The M120 mobile crane by Herbert Morris Ltd.*

3. *The Coles L710S full-circle slewing, diesel-electric crane by Steels Engineering Products Ltd.*

4. *The 38-RB high-lift crane by Ruston-Bucyrus Ltd.*

5. *The Allen mobile excavator, with 25 ft jib and crane equipment by John Allen & Sons (Oxford) Ltd.*

6. *The NCK-605 by Newton Chambers & Co. Ltd.*

7. *Type NMS mobile crane by R. H. Neal.*

8. *Jones KL66 mobile crane by K. & L. Steelfounders & Engineers Ltd.*

9. *Rapier-5 Super mobile crane by Ransomes & Rapier Ltd.*

10. *BK-Fifty crawler crane, by Blaw-Knox Ltd., fitted with 70 ft jib which has lifting capacity of 1.65 tons at 21 ft radius.*

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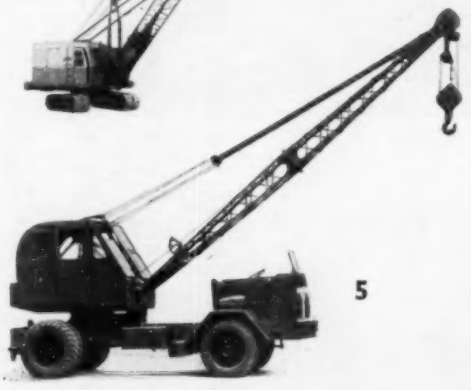

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Mobile Cranes Continued

Supplier	Model	Key	Jib Lengths									
R. H. NEAL & CO. LTD.	NMS	Jib	20′	25′	30′	35′	40′	45′				
		A	3	3	3	3	1.5	1				
		B	18.5	23.75	29	34	37.25	42.5				
		C	10.5	10.5	10.5	10	15	19				
		D	22	25	30	32	38	40				
		E	7.25	12.5	13.75	21	20.5	26.75				
		F	1	0.75	0.5	0.5	0.25	0.25				
	QMS	Jib	20′	25′	30′	35′	40′	45′	50′	60′		
		A	6	6	6	4	3	3	2	1.5		
		B	19.5	24.75	28.5	33.25	38	43.5	48.5	58		
		C	9.5	9.5	9	11	13	12.5	16	19		
		D	19	23	30	34	40	38.5	50	55		
		E	12.5	15.5	14	17	16	28	18	30.5		
		F	2	1.5	1	0.75	0.5	0.5	0.25	0.25		
	RM	Jib	30′	35′	45′	60′	75′					
		A	12	12	6	4	3					
		B	29.5	35	44	58.5	73					
		C	10	10	17	21	25					
		D	28	35	43	60	65					
		E	18.5	17	24.25	23.25	45.25					
		F	3	1.5	1.5	0.75	0.5					
NEWTON CHAMBERS & CO. LTD. (Figures given are for standard machines at 66 2/3% rating)	NCK 205	Jib	30′	35′	40′	45′	50′	55′				
		A	7.19	7.16	7.13	7.10	5.32	5.29				
		B	33.83	39	44.08	49.17	53.83	58.75				
		C	10	10	10	10	12	12				
		D	30	35	40	45	50	50				
		E	17.75	18.83	19.67	20.75	21.58	33				
		F	1.57	1.25	1.01	0.82	0.67	0.65				
	NCK 304	Jib	35′	40′	45′	50′	55′	60′	65′	70′		
		A	8.08	8.08	8.01	7.95	7.88	5.67	5.60	5.54		
		B	39.17	44.25	49.33	54.5	59.6	64	69.25	74.25		
		C	12	12	12	12	12	15	15	15		
		D	30	35	40	45	50	50	50	50		
		E	27	29	30.5	32	33.5	42.25	50	57		
		F	2.3	1.87	1.49	1.17	0.88	0.80	0.74	0.67		
	NCK 605	Jib	50′	55′	60′	65′	70′	75′	80′	90′	100′	110′
		A	17.34	17.31	17.23	17.19	17.15	17.08	11.15	11.08	7.92	7.83
		B	55.5	60.5	65.5	70.5	75.75	80.75	85	95	104.5	114.5
		C	15	15	15	15	15	15	20	20	25	25
		D	45	50	55	60	65	65	70	75	75	75
		E	35	37	38.5	39.5	40.75	49.25	50.5	61	76.75	90.5
		F	3.87	3.32	2.84	2.43	2.09	2.04	1.74	1.42	1.30	1.20
JACK OLDING & CO. LTD.	LIMA 1201	Jib	60′	70′	80′	90′	100′	110′	120′			
		A	55.49	44.36	44.24	29.35	27.33	25.35	22.97			
		B	65	76	86	95	105					
		C	12	15	15	20	20	20	20			
		D	60	70	80	90	100	110	120			
		E	28	31	32.5	32.5	35					
		F	6.52	5.08	3.97	3.09	2.20	1.52	0.79			
PRIESTMAN BROS. LTD.	WOLF IIIB	Jib	32′	40′								
		A	3.35	1.5								
		B	35.5	41.25								
		C	10	18								
		D	30	40								
		E	21	18.5								
		F	0.70	0.45								

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1. *Type G.10 Jules Weitz Tower Crane by Sheepbridge Engineering Ltd. Height 69 ft 6 in. Reach up to 49 ft 2½ in.* **2, 3 & 7.** *These show the Everest T.30, by the George Cohen 600 Group, in three stages: 2—operating, 3—being erected and 7—dismantled for transport. Designed for loads of 59 cwt at 31 ft radius and 85 ft high.* **4.** *Mark III by Wickham Engineering Co. Ltd. Has max. capacity of 3½ tons and max. lift height of 120 ft. Lifts 1 ton to height of 80 ft at 65 ft radius.* **5.** *The Everest Climbing Crane by 600 Group. Can be used as crane, passenger and material lift and concrete bucket hoist. Maximum height 300 ft.* **6.** *Coles LT 2310 by Steels Engineering Products Ltd., with 60 ft jib and pivot of jib 36 ft high.*

A list of manufacturers: Abelson & Co. (Engineers) Ltd. Acrow (Engineers) Ltd. Sheepbridge Engineering Ltd. Steels Engineering Products Ltd. The George Cohen 600 Group. Wickham Engineering Co. Ltd.

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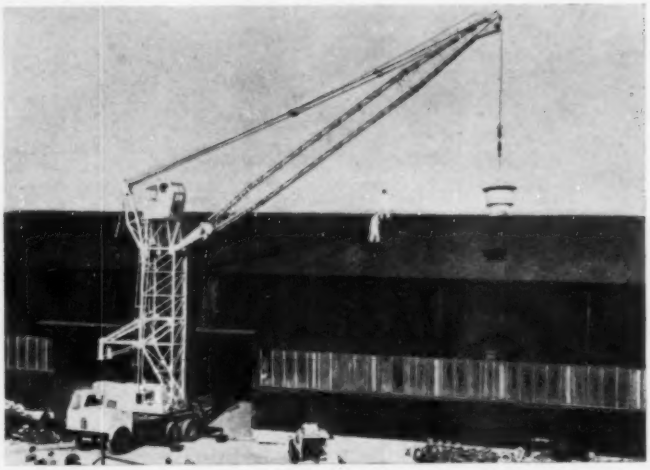

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Tower Cranes

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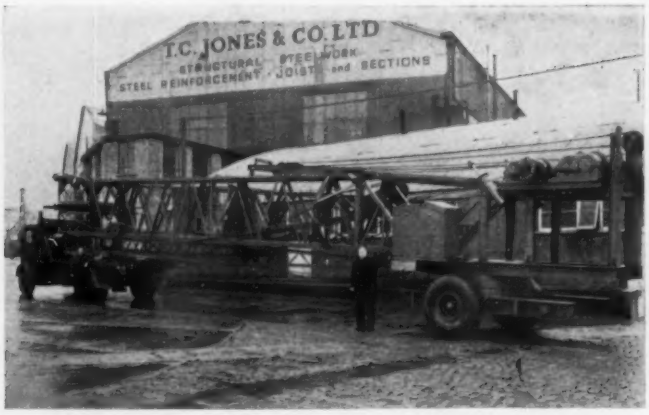
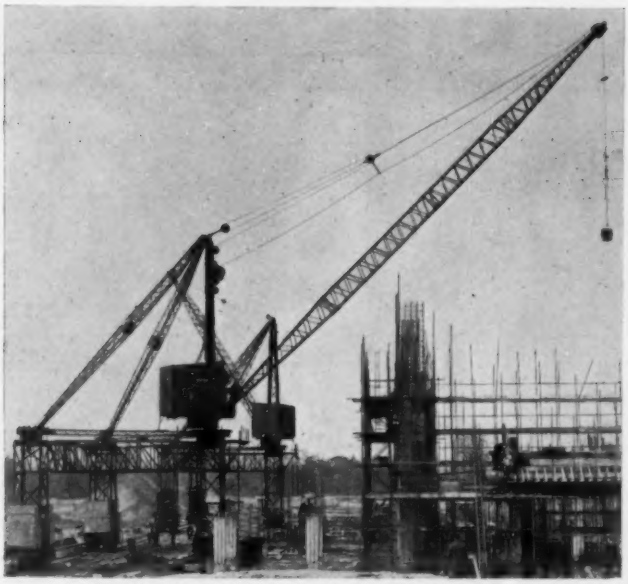


Mobile Cranes Continued

Supplier	Model	Key	Jib Lengths									
PRIESTMAN BROS. LTD.	CARIBOU	Jib	25′	35′	45′	55′	65′					
		A	5.96	5.96	4.66	3.44	2.66					
		B	29	40	50	59	69					
		C	10	10	12	15	18					
		D	25	30	35	45	55					
		E	17	27	37	41	45					
		F	1.89	1.48	1.15	0.73	0.44					
	TIGER V	Jib	35	40	45	50						
		A	6.03	4.78	3.83	2.92						
		B	38.75	43.25	48	52.5						
		C	11	13	15	18						
		D	35	40	45	50						
		E	20.75	22	23.25	24.5						
		F	1.26	0.96	0.71	0.52						
RANSOMES & RAPIER LTD. (Forward outreach figures are given in lieu of radius)	3 Standard	Jib	K	L	M							
		A	3	1.5	1							
		B	15.75	19.75	23.25							
		C	3.42	8.62	11.62							
		D	10.5	15.5	20.37							
		E	6	7.25	8.25							
		F	1.35	0.8	0.5							
	5 Super	Jib	K	L	M							
		A	5	2.5	1.75							
		B	21.08	26.25	30.25							
		C	3.5	7.5	8.87							
		D	15.5	20.96	25.5							
		E	6.83	8.17	9							
		F	1.25	0.75	0.5							
	6 Standard	Jib	K	L	M							
		A	6	3.75	3							
		B	20.92	26.25	30.08							
		C	4.5	7.83	10.04							
		D	11.54	18.08	22.37							
		E	8.5	10.17	10.83							
		F	2.75	1.75	1.25							
	7 Standard	Jib	K	L	M							
		A	7.5	3.75	3.75							
		B	21.17	26.5	30.33							
		C	4.5	7.83	10.04							
		D	11.54	18.08	22.37							
		E	7.75	10.42	11.08							
		F	3.75	2	1.5							
	6 Fast Standard	Jib	K	L	M							
		A	6	4	3							
		B	20.83	26.08	29.83							
		C	4.5	7	10							
		D	11.33	17	22							
		E	8.67	10.17	11.08							
		F	2.5	1.5	1							
	7 Fast Standard	Jib	K	L	M							
		A	7.5	5	3.75							
		B	20.83	26.08	29.83							
		C	4.5	7	10							
		D	11.33	17	22							
		E	8.67	10.17	11.08							
		F	2.5	1.5	1							

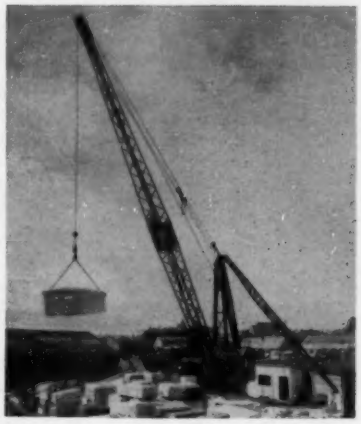
Miscellaneous

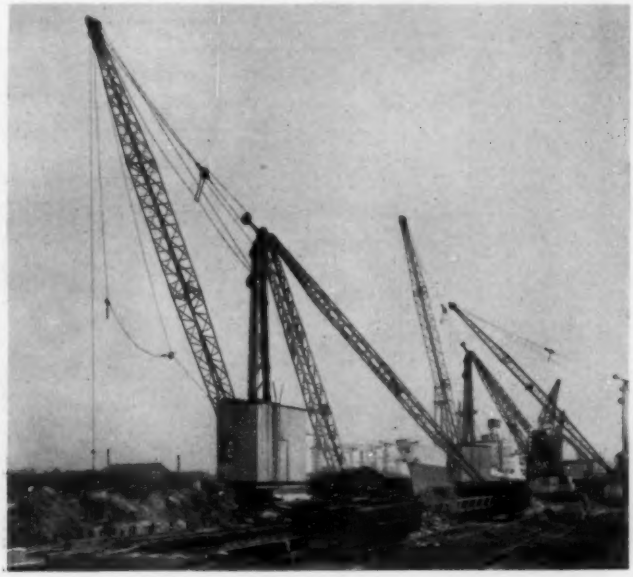


Above: 10-ton motor derrick by John M. Henderson & Co. Ltd. Hoisting, derricking and slewing motions operated by separate motors.

Right: 5-ton single motor derrick crane by John M. Henderson & Co. Ltd. Fitted with 80 ft jib and having full load radius of 68 ft.

Below: 3 of 7 Henderson electric derrick cranes mounted on travelling bogies operating at Shieldhall Quay on the Clyde. Cranes are of 7 ton capacity with 100 ft jibs and radius of 75 ft.



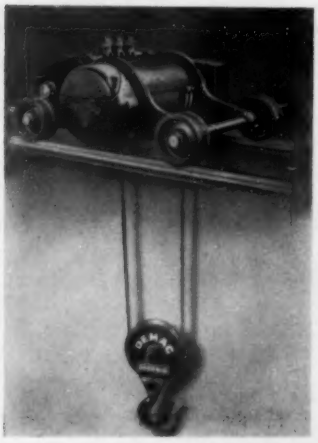


Above: The Booth diesel crane by Joseph Booth & Bros. This crane has a sprung shunting carriage.

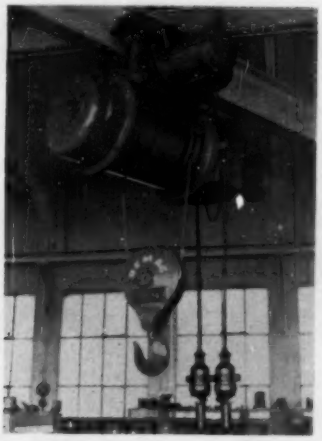
Below: A Booth steam loco crane by Joseph Booth & Bros. Shown here with non-sprung carriage and arranged for grabbing duty.

Mobile Cranes *Continued*

Supplier	Model	Key	Jib Lengths									
RANSOMES & RAPIER LTD.	10 SUPER	Jib	K	L	N	M						
		A	10	5.25	4	2.5						
		B	22.0	31.5	38	50						
		C	5.5	11	15	21.5						
		D	12.83	24.5	31	45.5						
		E	9.25	11	13	12						
		F	4.5	2.25	1.75	0.75						
RUSTON-BUCYRUS LTD.	10-RB	Jib	30′	35′								
		A	3	1.91								
		B	32.8	36.6								
		C	11	15								
		D	25	34								
		E	24	26.8								
		F	0.96	0.52								
	19-RB	Jib	40′	45′	50′	55′	60′					
		A	4.60	3.10	3.06	4.51	4.02					
		B	43	46.5	51.75	58	62.75					
		C	15	20	20	15	16					
		D	40	43	48	50	55					
		E	22.25	25	26	34.25	35.75					
		F	1.11	0.96	0.76	0.66	0.59					
	22-RB	Jib	40′	45′	50′	55′	60′	65′	70′			
		A	7.81	5.58	5.56	5.40	5	3.57	3.54			
		B	43.5	47.75	53	58	62.75	67	72			
		C	12	15	15	15	16	20	20			
		D	37.5	40	47.5	50	55	60	65			
		E	25.75	31	28.5	34.25	35.75	37.25	38			
		F	1.54	1.36	0.96	0.83	0.66	0.53	0.42			
	38-RB	Jib	45′	50′	60′	70′	80′	90′	100′			
		A	19.46	12.90	12.77	12.68	9.29	9.20	7.14			
		B	50	53.75	64	74.5	83.5	93.75	102.95			
		C	15	20	20	20	25	25	30			
		D	42.5	47.5	57.5	67.5	75	85	90			
		E	31.5	33	36	38.5	44	46.5	58			
		F	4.68	3.85	2.69	1.95	1.46	1.05	0.90			
THOMAS SMITH & SONS (RODLEY) LTD.	MEC.	Jib	30′	40′	50′	60′	70′	80′	90′	100′		
		A	15	10	8	7.75	5.75	4.25	3.75	2		
		B	35.25	45	54.8	65	75	85	95	104		
		C	10	12.5	15	15	17.5	20	20	30		
		D	30	35	40	45	50	50	55	60		
		E	20	31	40	49	58.5	71.25	80	88.5		
		F	4.2	3.5	2.75	2.0	1.0	0.88	0.5	0.25		
STEELS ENGINEERING PRODUCTS LTD.	Pyrrhus S410	Jib	15′	20′	25′	30′						
		A	3	3	3	2.75						
		B	21	26.75	32.25	38.5						
		C	10	10	10	10						
		D	15	20	25	30						
		E	10	10	10	10						
		F	2	1.25	0.75	0.5						
	Apollo L710	Jib	15′	20′	25′	30′	35′	40′				
		A	6	6	6	6	4.5	4				
		B	23	29	34	39.25	43.75	49.75				
		C	8	8	8	8	10	10				
		D	15	20	25	30	30	30				
		E	14.5	15	14.5	15	14	13				
		F	3	2	1.5	1	0.75	0.75				



1



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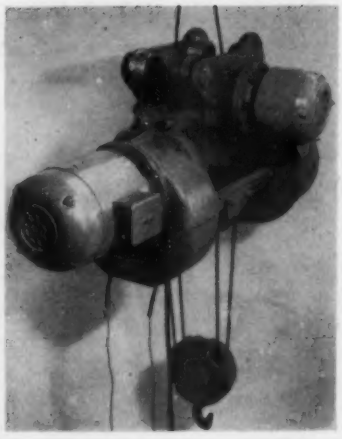


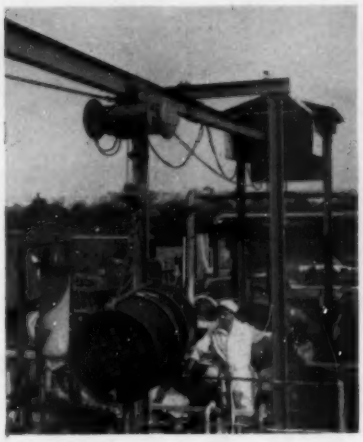
1. Demag double rail crab EZK30 2/1 of 25 in standard gauge by Aabacas Engineering Co. Ltd. The cap protecting gear wheel and pinion has been removed to show how travelling wheels are keyed to axles.

2. Demag lower flange travelling crab type EUK, with electric travelling gear, by Aabacas Engineering Co. Ltd.

3. Steelworks heavy duty type electric hoist by Reed Crane & Hoist Co. Ltd. Fitted with totally enclosed oil bath gearing for heaviest duty.

Centre. 2-ton electric travelling hoist block by Herbert Morris Ltd. Available up to 5-ton capacity in this type.

4. 30 cwt Builders' hoist, by Wickham Engineering Co. Ltd., with tipping skip arranged for concrete elevation.



Hoists

5. A.C.E. 10 cwt capacity "Comet" mobile hoist powered by AVAI diesel engine, by A.C.E. Machinery Ltd.

6. Ant-Queen mobile hoist type AQ10, fitted with AVAI air-cooled diesel engine, by British Hoist & Crane Co. Ltd.

A list of Manufacturers:
A.C.E. Machinery Ltd.
Aabacas Engineering Co. Ltd.
British Hoist & Crane Co. Ltd.
Felco Hoists Ltd.
Herbert Morris Ltd.
Richard C. Gibbins & Co. Ltd.
Reed Crane & Hoist Co. Ltd.
Wharton Crane & Hoist Co. Ltd.
Wickham Engineering Co. Ltd.

4

5

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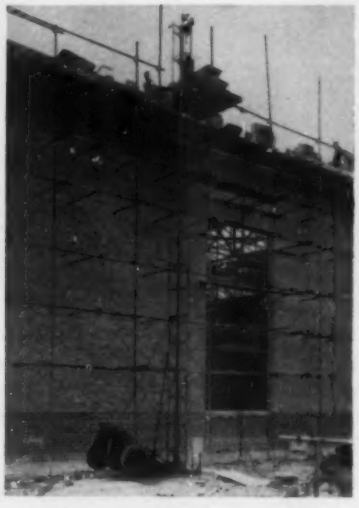
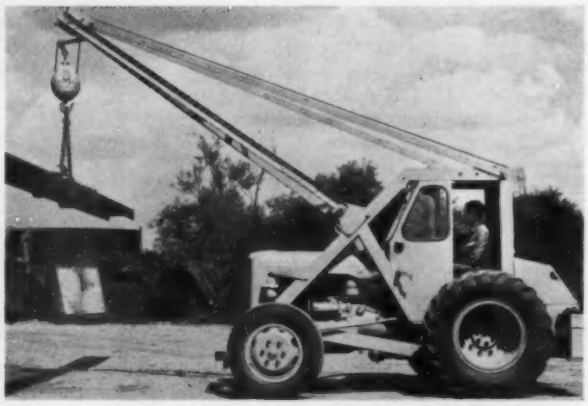


Light Cranes

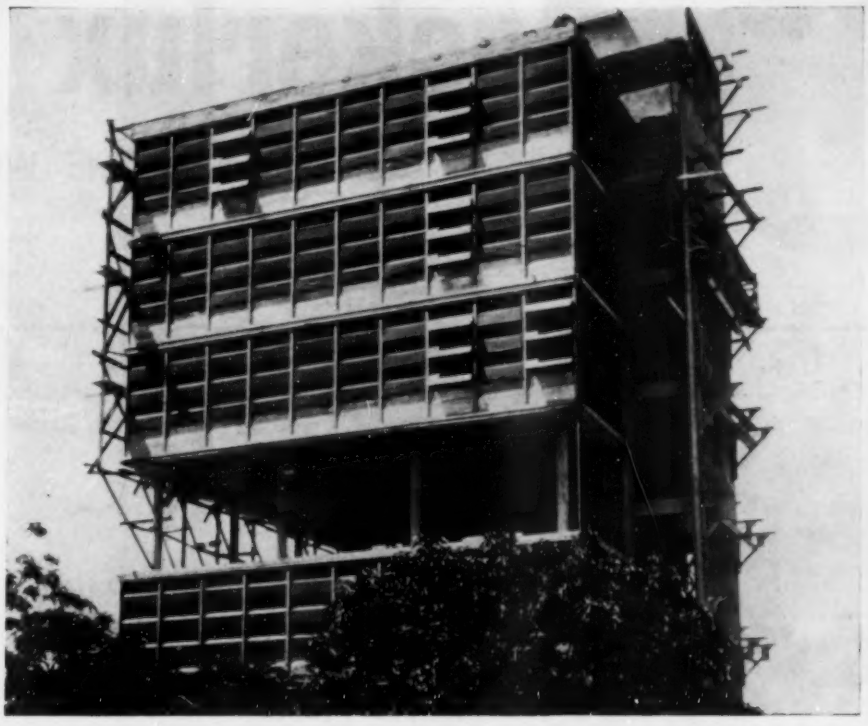
The Shop Truck Crane by Ransomes & Rapier Ltd. Will lift 1 ton, 12 ft above ground or 7 cwt at 10 ft 8 in outreach to a height of 2 ft 3 in. Jib 12 ft. Petrol/electric power unit.

The Iron Fairy by British Hoist & Crane Co. Ltd. All hydraulic crane movement and telescopic jib. Maximum load is 2 tons to a height of 14 ft or 1 ton to a radius of 12 ft and height of 18 ft.

The Mark III County-Boughton Side Boom Crane by County Commercial Cars Ltd. Will lift up to 5 tons with an overhang of 4 ft or 1 ton with 10 ft overhang.



The Chaseside C.I. mobile crane by Chaseside Engineering Co. Ltd. Will lift 1 ton to a height of 12 ft 3½ in. Diesel engine 44 b.h.p.



CO-OPERATIVE BANK, ACCRA JAMES CUBITT, SCOTT & PARTNERS, *Architects*

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seen above during installation on the east elevation: the west elevation is similar. 'Z' type louvres were designed to combat tropical heat and glare while providing full ventilation. They are ¾" thick with a metal outer skin, lined with insulating material, and are pivoted on weathertight bronze cup pivots. They are coupled for simultaneous operation and mechanically held in any position

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FILLEX
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★ has excellent keeping qualities (but should be protected from frost).
★ is supplied in 4 lb. and 16 lb. tins.
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Mobile Cranes *Continued*

Supplier	Model	Key	Jib Lengths									
STEELS ENGINEERING PRODUCTS LTD.	Juno L710S	Jib	30′	40′	50′	60′						
		A	5	3.5	2.5	2						
		B	35.75	45.5	54	64						
		C	10	12	15	15						
		D	30	35	35	35						
		E	22	32	45.5	58						
		F	1.25	0.75	0.75	0.5						
	Leander L910	Jib	20′	25′	30′	35′	40′					
		A	7	6.75	6.5	4.25	3					
		B	28.5	34.25	39.5	44.25	48.5					
		C	10.5	10.5	10.5	12.5	15					
		D	20	25	30	35	35					
		E	11	16	16.5	17.5	31.5					
		F	2.25	1.5	1.25	0.75	0.5					
	Centaur L1210	Jib	20′	25′	30′	35′	40′					
		A	10	10	10	7	4.5					
		B	29	35	40.25	45	49					
		C	10	10	10	12	15					
		D	20	25	30	35	40					
		E	15	16	16.5	16	17					
		F	3.5	2.5	1.75	1.25	1					
	Aeneas S1210	Jib	20′	25′	30′	35′	40′					
		A	10	10	10	7	4.5					
		B	28	33.5	39	43.25	47.5					
		C	10	10	10	12	15					
		D	20	25	30	35	40					
		E	16	16.75	17.25	17.5	18					
		F	3.5	2.5	1.75	1.25	1					
	Odin L1710	Jib	30′	40′	50′	60′	70′	80′				
		A	15	12	11	7.5	7.5	7.5				
		B	36	46	56	66	76	86				
		C	10	12	12	15	15	15				
		D	30	40	45	50	50	50				
		E	20	23	34	45	59	72				
		F	3.25	2	1.5	1.25	1.25	1				
	Thor S1710	Jib	30′	40′	50′	60′	70′	80′				
		A	15	12	11	7.5	7.5	7.5				
		B	36	45.8	55.8	65	75	85				
		C	10	12	12	15	15	15				
		D	30	40	45	50	50	50				
		E	20	21.8	33	44	58	71				
		F	3.25	2	1.5	1.25	1	1				
	Atlas L2310	Jib	30′	40′	50′	60′	70′	80′				
		A	20	16.5	16	12	11.5	11				
		B	35.8	45	55	67	75	85				
		C	10	12	12	15	15	15				
		D	30	40	45	50	60	60				
		E	20	24	33	44	46.5	64				
		F	5	3	2.5	2	1.5	1.5				
	Milo S2310	Jib	30′	40′	50′	60′	70′	80′				
		A	20	16.5	16	12	11.5	11				
		B	36	45.5	56	65	75.5	85				
		C	10	12	12	15	15	15				
		D	30	40	45	50	60	60				
		E	21	24	35	44.5	48	63				
		F	5	3	2.5	2	1.5	1.5				

Recognition and Prevention of Wire Rope Corrosion

WIRE ropes are used in the Building Industry in a variety of ways, but where they are used for raising or lowering material or personnel or suspension of staging, etc., they are always a potential danger. The Building (Safety, Welfare and Health) Regulations 1948, section 58, state that "No rope should be used for these purposes unless it is of good construction, made of sound material, strong enough to carry the load and free from patent defect." All except the last item can be guaranteed by the makers, but to keep the rope free from patent defects is the responsibility of the owner.

Broken strands of the rope can easily be seen, but the worst enemy to wire ropes is corrosion. The ropes being made of steel are a very ready target for corrosion, and when this takes place to any extent without being observed, failure of the rope follows, leading to serious and sometimes fatal accidents.

"Pignon" tower crane in operation on the site of the new National Provincial Bank at Plymouth. Main contractors Humphreys, Ltd. The crane is built by Messrs. Tichaur of Lyons and stands 110 ft high. It can lift 2½ tons at a distance of 50 ft from centre pillar and 16 cwt at a radius of 82ft (end of jib). There is an automatic safety cut-out which prevents safety load limits being exceeded

Corrosion of ropes can be divided into two classes, namely, external and internal, the former being easy to observe, the latter does its destructive work unseen. It is safe to say that if external corrosion is present, internal corrosion is most probably taking place.

Corrosion of a wire rope can be started from a number of causes, the most common being acid or alkaline water, sea air, fumes, etc., due to the local conditions. It is well to remember that a prevailing wind which passes over an area where the above causes exist, will carry the necessary ingredients for corrosion for many miles. When any one or combination of these causes is present, corrosion will almost certainly be set up, it attacks the whole length of the rope in general and in particular certain parts.

The most vulnerable parts of a wire rope are those that pass round a pulley, roller, drum, etc., and particularly when the machine is at rest. For example, on a derrick the trouble points are Jib Head Pulley, Mast Head Pulley, the two Reefing Pulleys, and both winding drums. With a Mobile Crane the Jib Head Pulleys and the drum are the important points and on a mixer the Bull Wheel, Winding Drums and the anchorage round the hopper. Moisture, fumes, etc., can collect in the cavity between the pulley, drum, etc., and the face of the rope and also in the lay of the rope where it is stretched while passing round the pulley. The lay (that is the direction in which the strands of the rope are twisted, are opened by the action of the rope being stretched) form cavities which are ideal collecting places for corrosion agents.

How to recognise corrosion

Clean the rope carefully from end to end, having first marked the position of the pulleys or drum when the machine is at rest, so that these points can be specially examined. Examine the rope for encrusted rust or pitting which are the signs of external corrosion and if this is found it should be assumed that internal corrosion has started at the same point. To be certain of internal corrosion is not an easy matter, but the following suggestions may be of some help. Under wet conditions, if pressure is put on the rope an emulsified liquid will appear. If extensive corrosion has taken place the wires will appear slack, due to the inner strands of each lay having been eaten away, and when this happens the rope can be crushed by a light pressure.

Remedy

Once corrosion has started nothing can bring the rope back to normal, but there are the recognised methods of checking it. When a rope is made, every precaution is taken by the makers to make the rope corrosion proof, in that they grease the core and strands in the course of manufacture, and although this initial precaution will last for a period, it will not last the normal life of a rope. The best remedy is to keep the rope clean, because when grease is allowed to harden, it forms an excellent point for the collection of moisture and foreign matter. If this moisture and matter is acid laden and the rope is worked, the deposit will soon work its way through the strands and will turn the grease into a corrosive, setting up both external and internal corrosion. The rope should first be properly cleaned (the best material to use for this purpose is hessian) but on no account should paraffin or petrol be used, as this will work its way through the lay of the rope and destroy the grease that has been put there during manufacture. It should then be coated with a good lubricant free from acid and this should be applied with hessian in a liberal manner and worked into the lay of the rope. Any reputable oil company can supply the grease for this operation.

Where corrosion is causing serious trouble to ropes through local conditions, it is usually better to use galvanised ropes, but care must be taken that where ropes of this kind come into contact with pulleys, etc., the galvanising will wear off and they must be treated externally as ordinary ropes. Internally the galvanising will last for a long period and give good service.

W. R. S.

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Industrial Notes

● The Board of Trade recently offered for sale by tender about 100,000 standards of softwood from the Government stockpile. Successful tenderers have been notified. The Board are now prepared to negotiate for the sale of the unsold balance. Any enquiries should be addressed to the Board of Trade, C. & G.8 Division, Lacon House, Theobalds Road, London, W.C.1.

● Imperial Chemical Industries Ltd. announce that it has been decided to make no further increase in the home trade prices of the Company's chemicals, dyestuffs, explosives, fertilizers, fibres, paints, pharmaceuticals, and plastics at least until 30th June, 1957, provided no unexpected or exceptional factors intervene, and provided the Company does not incur any major increase in the cost of freight or fuel before that date. The production costs of certain of the Company's products, particularly those involving non-ferrous metals, depend markedly on imported raw materials which fluctuate widely in price, and for these the Board can do no more than continue their policy of price restraint. During recent years, I.C.I. has lowered prices for a number of its products. The Company will continue its efforts to achieve further reductions whenever this becomes practical, either as a result of continuing progress in productive efficiency by the Company, or because of lowered costs of raw materials or external services.

● The Caterpillar Tractor Co. Ltd. have purchased the factory, plant and stock-in-trade of the Birtley Company Ltd., at Birtley, County Durham. The Birtley Company has, for the past nine years, been manufacturing earth-moving equipment under licence from the American parent of British Caterpillar and this manufacture will be continued and expanded. Col. R. T. Edwards, Managing Director of the Birtley Company, will continue in charge as Manager of the Caterpillar operations at Birtley and becomes a member of the Board of Directors of Caterpillar Tractor Co. Ltd. This expansion of British Caterpillar complements a parts business conducted at Desford, Leicester, and a tractor factory now under construction at Glasgow. When this is completed the three Caterpillar operations in the U.K. will occupy total covered space in excess of one million square feet and employ more than 3,000 people.

● The Lincoln Electric Company of Cleveland, Ohio, U.S.A., has terminated its association with Lincoln Electric Company Limited of Welwyn Garden City, England. The sole distributor in the United Kingdom for all of their products is now Armco Limited of 75, Grosvenor Street, London, W.1, to whom inquiries regarding current products and future developments should be addressed.

● Wm. Sanders & Co. (Wednesbury) Ltd. announce that owing to increasing costs of labour and materials, they have been compelled to increase the prices of all gear manufactured by them by 5 per cent. dating from 8th August, 1956.

● In order to assist still further in the stabilization of prices in the national interest the Plasterboard industry announces that it intends to hold firm the present selling prices of Plasterboard at least until the end of 1956, provided that no major adverse factors emerge.

● The British Plaster Board (Holdings) Ltd. announces on behalf of its wholly owned Subsidiaries in the United Kingdom that for the same reason as stated by the Plasterboard industry it intends to hold firm the present selling prices of Gypsum Rock and Plasters at least until the end of 1956, provided that no major adverse factors emerge.

● Thermacoust Ltd. announce that they do not propose to make any increase on their current prices for Thermacoust Woodwool Roofing Slabs before the end of 1956, and hope to be able to maintain them during the New Year, if no major increases in costs of raw materials occur.

● Continually rising production costs have forced Newton, Chambers & Co. Ltd. (of Thorncliffe, near Sheffield) in common with the majority of other heating appliance manufacturers, to increase the prices of some of their products. The new retail prices are available from Newton, Chambers and for an example of the new prices the Redfyre Open Convector Fire now costs £12 15s. 6d. with gas ignition, overnight burning plate, and deepening bar—8s. each.

● The Tomo Group of Companies announce that they have appointed Mr. Harold W. Joynes as Public Relations Officer for the four Companies in the Group. These Companies are: Tomo Trading Co. Ltd., Linden Doors Ltd., Stramit Boards Ltd. and T. F. Sampson Ltd. Mr. Joynes will be operating from the Companies Offices at Packet Boat Dock, Cowley Peachey, Nr. Uxbridge.

● Mr. E. T. Gill, B.Sc., F.I.M., has joined the staff of the Development and Research Department of the Mond Nickel Co. Ltd. as Development Officer for Constructional Alloy Steels. He is taking up the position which became vacant when Mr. L. W. Johnson was appointed Assistant Manager of the Department.

A rotor excavator for digging trenches for gas and oil pipe lines which is on show at the permanent U.S.S.R. Building Exhibition in Moscow.

CORRECTION

On page 60 of THE ARCHITECT AND BUILDING NEWS, issue July 12, we credited Messrs. Ove Arup & Partners as the Consulting Engineers for the Office Group Accra. They were in fact Messrs. Bolton, Hennessey & Partners.

NEW PRODUCTS

The Wedco wire belt sling, Fig. 1, by the British Wedge Wire Co. Ltd. is constructed from 10 gauge steel wire fabric. The slings are fully articulated and because of the gripping action there is little danger of a load slipping. Basket or choke hitch may be used and safe working loads vary from 1 ton with a 3 in wide sling to 15 tons with 18 in sling according to the type of hitch employed.

★

Walter Carson & Sons Ltd. have considerably reduced their range of varnishes. The following nos. have been discontinued: 52, 54, 57, 60, 61, 64, 75 and 77. In replacement the following should be used: no. 76 extra pale elastic copal for nos. 52, 54, 61, 77, no. 56 finest pale paper for no. 57, no. 59 hard church oak for no. 60, no. 63 superfine yacht for no. 64 and no. 55 hard drying copal oak for no. 75.

★

Fig. 2 shows a new portable power point by Wolf Electric Tools Ltd. The unit comprises a drum mounted on a stand, a pair of built in 13 amp. 3 pin, ring main, insulated and shuttered flush sockets. These are connected to a terminal block mounted in the centre of the drum. The drum will accommodate 100 yds of 23/.0076 in, 90 yds of 40/.0076 in or 60 yds of 70/.0076 in 3 core TRS cable. Two portable electric tools may be operated simultaneously from the unit which is 12 in high by 10¼ in deep by 14½ in long and has a nett weight of 9¼ lbs.

★

The Board Division of The Bowater Paper Corporation have introduced a new standard hardboard 1 tenth in thick. This gives a weight saving of 23 per cent. and can cost as much as 12½ per cent. less than the standard ¼ in board. It is suitable as a covering or base material and is being used in the manufacture of car lining panels and radio backs. New uses are being discovered but it is emphasised that the ¼ in board is still recommended by Bowaters for normal building purposes.

★

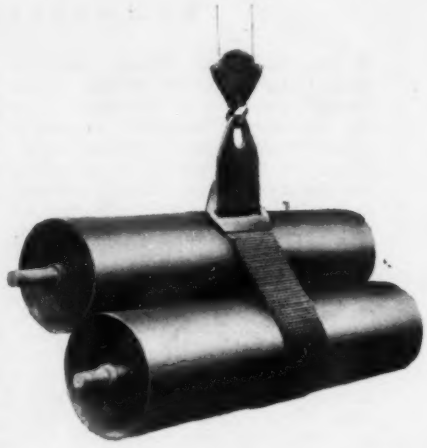
Tretolin paint, which is designed to provide a decorative and protective finish for concrete, cement renderings, asbestos cement, etc., is now available in a new colour range based upon a selection of shades from B.S. 2660, 1955 Colours for Building and Decorative Paints.

★

Fonadek (Branson) Ltd. announce the introduction of the Kedafon, battery operated, two-way intercommunication system. It is claimed to be the smallest unit of its type available. It is completely portable, having a two-valve circuit and by touch button method gives instant loudspeaker contact between individuals and departments. It consists of one master and one extension unit in hammered bronze and employs HT. 67½ volt and LT. 4½ volt batteries.

★

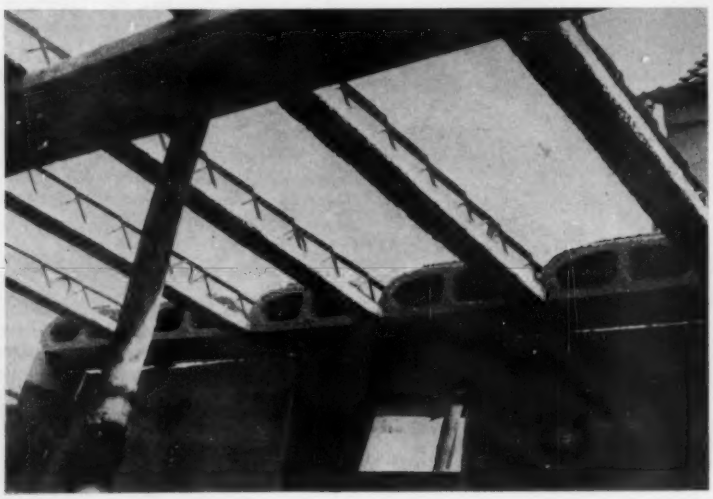
Dahl Bros. Ltd. have been appointed agents for "Maarud-Panel"—a Scandinavian product. It is an ornamental and flexible panel of drop leaf mouldings which are compressed by bonding to form panels. The mouldings are joined together with corrugated steel tape pressed into the back, each individual moulding being tongued and grooved. Standard measurements are: 24 in wide by ¼ in thick by 33¾ in to 14 ft long, in steps of 11¼ in. Available in birch, white pine and other timbers, the panels may be stained, varnished, oiled or polished.



1

2

From Omnia Floors Ltd. comes another addition to the many types of Steel and Concrete floor construction, Fig. 3. The "Omnia" floor combines the advantages of pre-cast and *in-situ* systems with a light weight, that makes it possible for two men to lay the pre-cast units, up to fifteen foot span. The units consist of specially reinforced pre-cast beams, with only the bottom flange concreted. Hollow blocks are then laid between the flanges of these beams, and the whole is screeded over. Extra reinforcement for continuity can be placed in the screed over the main lines of support, and trimming to openings for lanterns and ducts, etc., can be managed in the depth of the floor itself. The hollow blocks themselves may be of heavy or light weight concrete, pumice concrete or burnt clay, according to circumstance, but require the profile illustrated in the picture. Further technical advice and design service are available.



3

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AND OUR ASSOCIATED COMPANY

DETUNERS LIMITED

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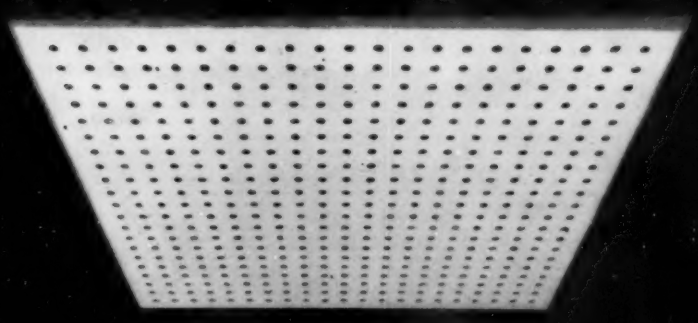

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Telephone FITzroy 1221

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Why Pammel gloss finish looks new longer

Pammel is a paint with a future—and the reason is to be found in its special formula. Into the perfection of Pammel, Blundell's have poured not only 145 years' paint-making experience but vital knowledge of advanced synthetic alkyd resins and the techniques of employing them. This, and the incorporation of "Epikote" resin, has enabled Blundell's to produce in Pammel a paint to meet and master today's most exacting demands. Pammel is easily applied and dries rapidly. It withstands all weathers, is unaffected by steam or condensation, and is remarkably resistant to 'blooming'. Sprayed or brushed, Pammel quickly attains surface hardness, which prevents the adhesion of dust and dirt, but does not lose its flexibility. Decorated with Pammel, property keeps its enviable newly-painted look *far longer*.

PAMMEL

the luxury gloss finish

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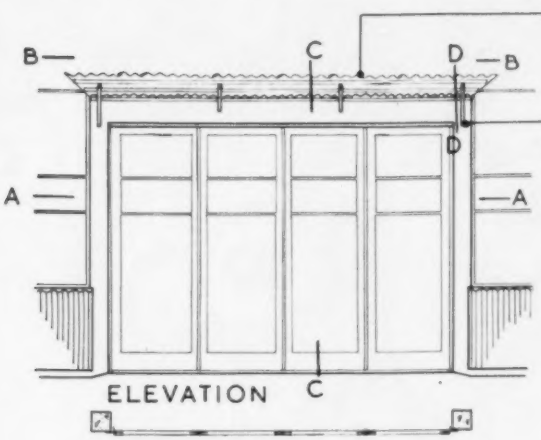
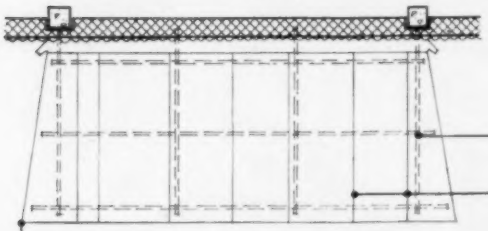
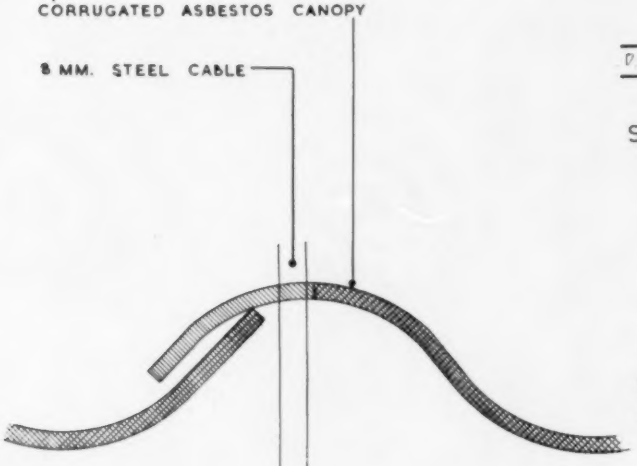


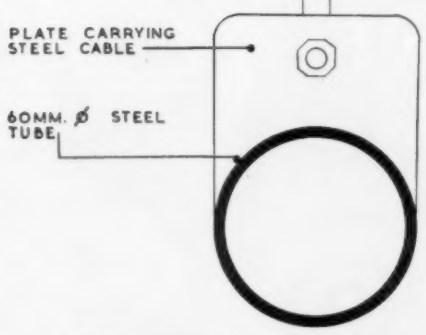
ELEVATION

PLAN ON A-A

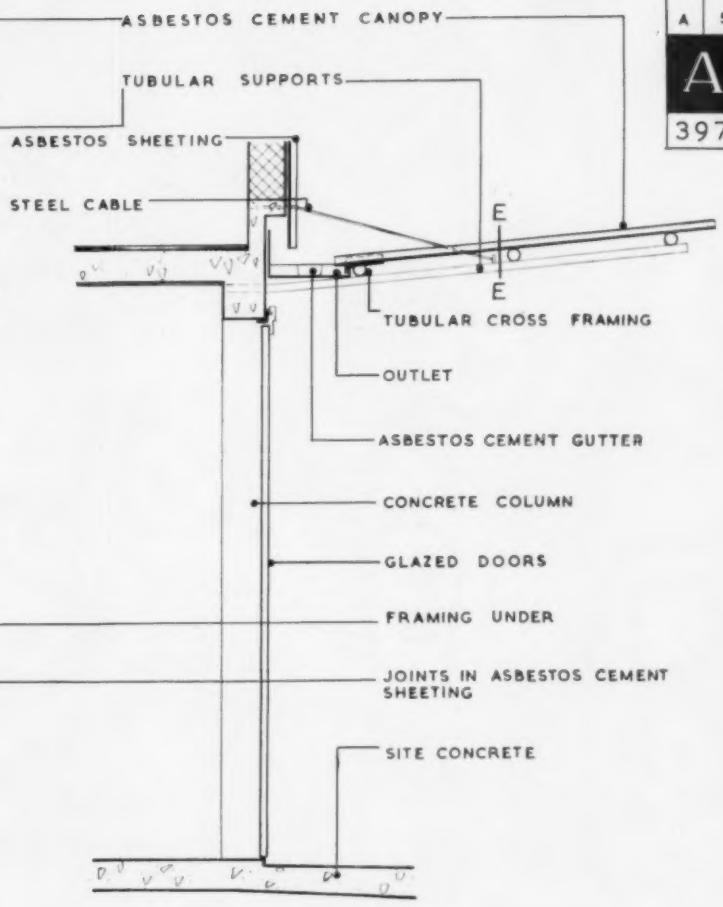


PLAN ON B-B • 1/8"-1'0"

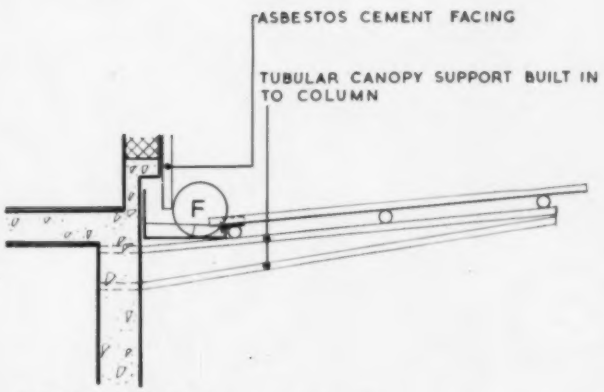




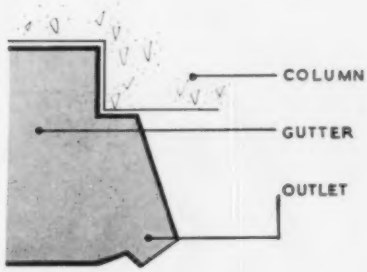
SECTION E-E • 1/2 F.S.



SECTION C-C • 1/4"-1'0"



SECTION D-D • 1/4"-1'0"



DETAIL AT F • 3/4"-1'0" • PLAN AT OUTLET

CANOPY. DOOR. FACTORY. LEIMEN. GERMANY. • ERNST NEUFERT

CANOPY : DOOR : FACTORY : LEIMEN : GERMANY
ARCHITECT: ERNST NEUFERT

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Reader's Name and Address.....

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Profession or Trade.....

DATE OF ISSUE 23 AUGUST, 1956

CONTRACT • NEWS •

*Notes below give basic data of contracts open under locality and authority which are in a bold type. References indicate : (a) type of work (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading (c) deposit (d) last date of application (e) last date and time for submission of tenders. Full details of contracts marked * are given in the advertisement section.*

OPEN

BUILDING

ABINGDON R.C. (a) Erection of 12 houses, 12 bungalows and incidental works on the Kennington (Poplar Grove) estate. (b) Council's Architect, 3 Bridge Street. (c) £3. (e) September 8.

* * *

ALCESTER R.C. (a) Erection of four houses at Sambourne. (b) Council's Surveyor, Council Offices. (c) 2gns. by cheque payable to Council. (e) September 5.

* * *

ALCESTER R.C. (a) Erection of 6 houses at Broom; sewage disposal plant—renewing existing works and resiting in new position. (b) Council's Surveyor, Council Offices. (c) 2gns. by cheque payable to Council. (e) September 5.

* * *

ATHERSTONE R.C. (a) Carrying out substantial alterations and extensions to the existing Council Offices. (b) Council's Engineer, Council Offices. (c) 3gns. (e) September 10.

* * *

BASINGSTOKE B.C. (a) Erection of 112 dwellings, together with ancillary site works, at St. Peter's Road. (b) Borough Architect, Municipal Buildings. (c) 2gns. (e) September 10.

* * *

BIDEFORD B.C. (a) Construction of a harbour office and weighbridge at the Quay, together with road works. (b) Borough Surveyor, Municipal Buildings. (c) 2gns. (e) September 11.

* * *

BRECONSHIRE C.C. (a) Erection of classroom, cloakroom and lavatory accommodation at Mount Street Primary School. (b) County Architect, Rhyd Offices. (d) August 28.

* * *

CARDIFF C.C. (a) Erection of the Llanrumney Clinic, Llanrumney Avenue. (b) City Surveyor, City Hall. (c) 2gns. (e) September 14.

* * *

CARDIGANSHIRE C.C. (a) Carrying out alterations to Alexandra Road School, Aberystwyth. (b) County Architect, County Hall, Aberayron, Cards. (c) 1gn. (e) September 3.

* * *

CORNWALL C.C. (a) Erection of (1) 2 houses and garages, section station, at St. Just; (2) 2 houses, office and garage at Mevagissey; (3) minor adaptations and alterations to police station at Camborne; (4) single house, office and garage at Lanivet; (5) 2 houses and garages at Saltash; and (6) 4 houses and garages at Looe. (b) County Architect, County Hall, Truro. (c) 3gns. for (1), (2), (3) and (4); and 1gn. for (5) and (6). (d) August 25. (e) September 17 for (1), (2) and (3); and October 5 for (4), (5) and (6).

* * *

CRAWLEY DEVELOPMENT CORPORATION. (a) Erection of an extension of the administration block and erection of a canteen and garage block at the Sewage Treatment Works, Radford Road, Tinsley Green. Approx. cost £11,500. (b) Chief Architect, Broadfield. (d) August 30.

MULLEN AND LUMSDEN
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BIRMINGHAM, 18: 63 Hockley Hill. Tel. Northern 1266

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Full details from
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L

CUCKFIELD R.C. (a) Contract No. 121. Erection of 42 flats at Hassocks. (b) Council's Engineer, Council Offices, Bo.tro Road, Haywards Heath, Sussex. (c) 2gns. (e) September 10.

* * *

DOLGELLEY U.C. (a) Conversion of Bryntirion Mount, Pleasant Road, into three separate self-contained dwellings. (b) Council's Clerk, Bridge Street. (c) 2gns. (e) September 4.

* * *

DURHAM C.C. (a) Erection of additional sanitary accommodation at Hart.epool Henry Smith School, and proposed staffroom and additional lavatory accommodation at Seaham Girls' Grammar School. (b) County Architect, South Street. (d) August 29.

* * *

EAST RETFORD B.C. (a) Erection and completion of 52 dwellings, including paths, drainage, etc., at West Hill estate. (b) Town Clerk, Municipal Offices, East Retford, Notts. (c) 2gns. (d) August 31.

* * *

EAST SUFFOLK C.C. (a) Erection of extensions estimated to cost £60,000 to Felixstowe Grammar School. (b) County Architect, County Hall, Ipswich. (d) August 31. (e) October 2.

* * *

ESSEX C.C. (a) Erection of additional accommodation at Yardley Lane primary school, Chingford. Approx. cost £4,500. (b) County Architect, County Hall, Chelmsford. (d) August 27.

* * *

ETON R.C. (a) Construction of a brick built extension to existing garages at Burnham, and concrete foundation and erection of a prefabricated steel garage at Taplow. (b) Council's Engineer, Council Offices, Windsor Road, Slough. (c) £2. (e) September 8.

* * *

FLINT B.C. (a) Erection of 26 houses on the Bron Haul site, Bagillt. (b) Borough Engineer, Municipal Offices, Earl Street, Flint. (c) 2gns. (e) September 13.

* * *

KIRKBY IN ASHFIELD U.C. (a) Erection of (1) nine pairs type B2 dwellings; and (2) one block type K4 flats, at Lord Morven Park, School Street, estate. (b) Council's Surveyor, Public Offices, Kirkby in Ashfield (c) 2gns. (e) September 4.

* * *

LANCASHIRE C.C. (a) Carrying out adaptations to form civil defence training centre at Swinton, Old Market Hall. (b) County Architect, P.O. Box No. 26, County Hall, Preston. (c) £2 by cheque payable to Council. (d) August 28, quoting Ref. A/MG.

* * *

LANCASTER C.C. (a) Erection of 8 shops, 8 flats and 18 garages on the Ridge estate. (b) City Engineer, Town Hall, Lancaster. (e) September 5.

* * *

LEEDS C.C. (a) Contract No. 680—Erection of 130 dwellings on the Beckett Park, Butcher Hill and Tinshill estates. (b) City Architect, Priestley House, Quarry Hill, Leeds, 9. (c) £2. (e) September 11.

* * *

LIVERPOOL C.C. (a) Erection of two classrooms at St. George's C.E. Primary School, Heyworth Street, Liverpool, 5. (b) City Architect, Blackburn Chambers, Dale Street, Kingsway, Liverpool, 2. (c) 2gns. (e) September 3.

* * *

LIVERPOOL C.C. (a) Carry out improvements to the domestic science department at Roscoe, Ballantyne Road School, Liverpool 13. (b) City Engineer, Municipal Buildings, Liverpool, 2. (e) September 10.

* * *

LONDON—WANDSWORTH B.C. (a) Erection of 27 flats and 11 houses, together with road and sewer works, at Clarence Avenue, Clapham, S.W.4. (b) Town Clerk, Municipal Buildings, Wandsworth, S.W.18, giving details of experience, plant and technical and supervisory staff available, together with the names of two technical and two financial referees. (d) September 5.

* * *

LOWESTOFT B.C. (a) Erection of 4 houses in one terrace in Haward Street, Lowestoft. (b) Borough Engineer, 49 High Street, Lowestoft. (c) £2 (e) September 1.

* * *

LOWESTOFT B.C. (a) Erection of one pair of semi-detached houses in Raglan Street, Lowestoft. (b) Borough Engineer, 49 High Street, Lowestoft. (c) 2gns. (e) September 1.

* * *

MACCLESFIELD B.C. (a) Conversion of the old decontamination centre at Hurdsfield House into a bed/sitting room flats. (b) Borough Architect, 3 Jordangate, Macclesfield. (e) September 14.

London's Finest new & secondhand Value
ARCHITECTS' PLAN CHESTS
Steel & Wood Office Furniture
Filing Cabinets
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Secomastic Ltd. Bracknell, Berks. Tel: Bracknell 910

MANCHESTER CORPORATION. (a) Erection of 9 A.P.D.s, Grindley Avenue, Barlow Moor (Contract 258); 8 A.P.D.s, Evesham Road, Blackley (Contract 263); 14 maisonettes, Pembridge Road, Blackley (Contract 264). (b) Director of Housing, Town Hall, Manchester, 2. (e) September 4.

* * *

MANCHESTER CORPORATION. (a) New brick outer facing to gable, City Training College; (b) new lavatory block and alterations to existing buildings, Ducie Avenue Secondary School. (b) City Architect, P.O. Box 488, Town Hall, Manchester. (e) September 5.

* * *

MILFORD HAVEN U.C. (a) Erection of a block of 8 flats on the site of 109-117 Robert Street. (b) Council's Engineer, Town Hall, Milford Haven. (c) 2gns. (e) September 8.

* * *

MORLEY CORPORATION. (a) Erection and maintenance of a garage and stores at the Birk Lane Depot of the Waterworks Department, Morley. (b) Waterworks Manager, Bruntcliffe Lane, Morley. (c) 2gns. (e) September 8.

* * *

NANTWICH U.C. (a) Erection of 30 houses at Marsh Lane. (b) Council's Engineer, Brookfield House, Nantwich. (e) August 31.

NEWBURY B.C. (a) Erection of 40 bungalows at Shaw, Newbury. (b) Borough Surveyor, Municipal Buildings, Newbury. (e) September 10.

* * *

NEWMARKET U.C. (a) Erection of 28 houses in St. Wendred's Way, Exning. (b) Council's Architect, Council Offices, Severals House, Newmarket. (c) 2gns. (e) September 11.

* * *

NORTHAMPTON R.C. (a) Erection of depot building and ancillary works in three contracts as follows: Contract 1: site works; Contract 2: supply and erection of concrete building; and Contract 3: ancillary works. (b) R. J. Miller, 1 Cheyne Walk, Northampton. (c) 3gns. each section. (e) September 19.

* * *

NORTHAMPTON R.C. (a) Erection of 16 bungalows at Hardingstone. (b) Council's Architect, 1 Cheyne Walk, Northampton. (c) 3gns. (e) September 5.

* * *

N. IRELAND—BALLYCASTLE U.C. (a) Erection of 18 houses at Coleraine Road. (b) Council's Clerk, Council Offices, Castle Street, Ballycastle, Antrim, or Council's Architect, 1 Queen Street, Belfast. (e) September 1.

* * *

N. IRELAND—Co. ARMAGH. (a) Erection and completion of secondary intermediate school for girls, Marymount, Kitchen Hill, Lurgan, Co. Armagh. (b) W. H. McEvoy, Esq., Ulster Bank Chambers, 73 May Street, Belfast. (c) 5gns. (e) September 7.

* * *

N. IRELAND—MINISTRY OF FINANCE. (a) Erection of a R.U.C. substation at Loughgall, Co. Armagh. (b) Ministry of Finance (Room 103), Law Courts Buildings, May Street, Belfast. (c) £2. (e) September 4.

* * *

PETERBOROUGH C.C. (a) Erection of one block of eight terrace houses, and one block of four terrace houses, together with outbuildings, and ancillary works, at Eastfield estate, Park Lane (Buffer Depot site). (b) City Engineer, Town Hall, Peterborough. (c) 2gns. (e) September 10.

* * *

PORT TALBOT B.C. (a) Erection of 24 houses at the rear of Sandy Ridge, Sandfields, Port Talbot. (b) Borough Engineer, Municipal Buildings, Port Talbot. (c) 2gns. (e) September 11.

* * *

PRESTON B.C. (a) Erection of a gardener's house at the Larches Hostel, Larches Lane, Preston. (b) Borough Engineer, P.O. Box No. 10, Municipal Buildings, Preston. (c) 2gns. (e) September 6.

* * *

PRESTON B.C. (a) Erection of Brookfield primary school. (b) Borough Engineer, P.O. Box No. 10, Municipal Buildings, Preston. (c) 2gns. (e) September 20.

* * *

READING B.C. (a) Erection of 24 maisonettes in three blocks of eight in Coley Place, Reading. (b) Borough Architect, Town Hall, Reading. (c) 2gns. by cheque payable to Council. (e) September 7.

* * *

ROCHDALE B.C. (a) Erection of the new St. Peter's C.E. School, Kingsway, Rochdale. (b) Messrs. Grenfell, Baines and Hargreaves, 12-24 Guildhall Street, Preston. (c) 2gns. (e) September 12.

ROCHFORD R.C. (a) Contract No. 224, Erection of additional office accommodation at the Council Offices, Rochford. (b) Council's Engineer, Council Offices, Rochford, Essex. (c) £1. (e) September 10.

* * *

SCOTLAND—GLASGOW CORPORATION. (a) Several works in connection with the erection of 36 flats at Summertown Road, Govan. (b) Architectural and Planning Department, 20 Trongate, Glasgow, C.1. (e) August 30.

* * *

SCOTLAND—MIDLOTHIAN C.C. (a) Erection of 7 houses at Ratho. (b) County Architect, 32 Palmerston Place, Edinburgh, 12.

* * *

SCOTLAND—NORTHERN FIRE AREA JOINT COMMITTEE. (a) Supply and erection of steelwork for new central fire station at Longman, Inverness. (b) Burgh Architect, 11 High Street, Inverness. (e) September 12.

* * *

SCOTLAND—SOUTH-WESTERN FIRE AREA JOINT COMMITTEE. (a) Erection of a new fire station at Dumfries. All or separate trades. (b) Messrs. M. Purdon Smith and Partners, 31/33 Castle Street, Dumfries.

* * *

SOUTHPORT B.C. (a) Erection of 6 shops with living accommodation and outbuildings on the Radnor Drive site. (b) Borough Architect, 100-105 Lord Street, Southport. (c) 2gns. (e) September 14.

* * *

SOUTH SHIELDS B.C. (a) Erection of 93 houses at Whiteleas Estate, South Shields. (b) Borough Engineer, Town Hall, South Shields. (c) 2gns. (e) September 11.

STATES OF GUERNSEY. (a) Erection of a new secondary modern school to accommodate 600 pupils at Beaucamp, Castel. (b) States Engineer, States Office Annexe, Albert Pier, Guernsey. (c) 3gns. (e) October 1.

* * *

STOCKPORT CORPORATION. (a) Erection of an extension to the science block at Reddish Vale secondary modern school. (b) Borough Architect, Town Hall, Stockport. (c) 2gns. (d) September 3. (e) October 3.

* * *

TAMWORTH B.C. (a) Erection of aged persons' dwellings at Bolehall, Tamworth. (b) Borough Engineer, Municipal Offices, Tamworth. (c) 2gns. (e) September 3.

* * *

WEST RIDING OF YORKSHIRE C.C. (a) Carrying out adaptations and improvements to the farm house and buildings at High Farm, Green Hammerton, near York. (b) County Land Agent, County Hall, Wakefield. (c) 2gns. (e) September 7.

* * *

WEST RIDING OF YORKSHIRE C.C. (a) Carrying out adaptations to form office accommodation at Shipley Police Station. (b) County Architect, "Bishopgarth", Westfield Road, Wakefield. (e) August 31.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

BRISTOL CORPORATION. (1) 110 maisonettes, 15 flats. (3) Stone and Co. (Bristol) Ltd., 140 Redlands Road, Bristol. (4) £329,000.

NORTHFLEET, KENT. (1) Paper Mill for Bowaters Ltd. (3) Higgs and Hill Ltd., South Lambeth Road, London, S.W.8. (4) Cost: £1,250,000.

HULL CITY COUNCIL. (1) 238 dwellings. (2) Great Field Estate. (3) F. Bilton Ltd., 87 Wincolmlee, Hull. (4) £300,097.

LONDON COUNTY COUNCIL. (1) 158 maisonettes, 24 flats. (2) Bethnal Green, E. (3) Rush and Tompkins Ltd., 109 Station Road, Sidcup, Kent. (4) £482,720.

DAGENHAM B.C. (1) 100 dwellings. (2) Marks Gate Estate. (3) Works Department. (4) £162,568.

SOUTHAMPTON. (1) Offices for Eagle Star Insurance Co. Ltd. (3) F. Kimber and Son Ltd., Portswood Road, Southampton.

WARWICKSHIRE E.C. (1) Secondary school. (2) Kenilworth South. (3) Gilbert-Ash Ltd., 2 Stanhope Gate, London, W.1. (4) £109,002.

READING CORPORATION. (1) 62 dwellings. (2) St. Michael's Estate. (3) Walden and Son (Henley) Ltd., Gravel Hill, Henley. (4) £89,790.

KENSINGTON B.C. (1) 24 maisonettes. (2) Westbourne Park Road. (3) R. Mansell Ltd., 133 Oxford Gardens, London, W.10. (4) £68,028.

MALDEN, SURREY. (1) Extension of Holy Cross Convent. (3) W. J. Marston and Son Ltd., 1 Stephendale Road, Fulham, S.W.6. (4) £33,000.

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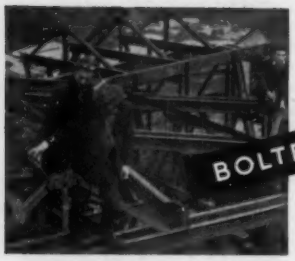

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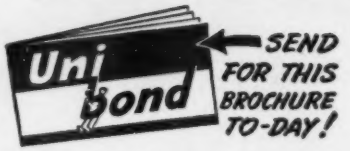

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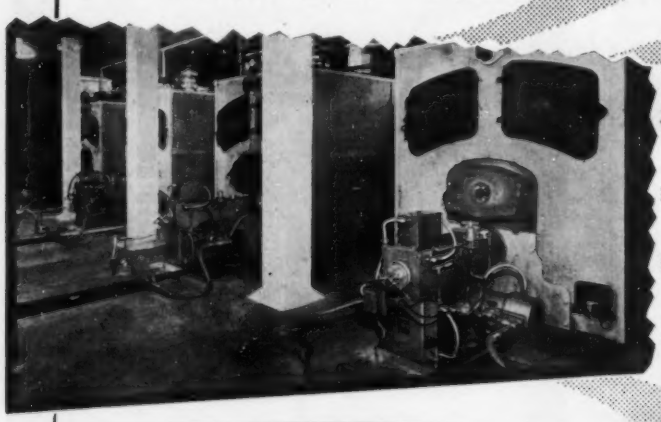

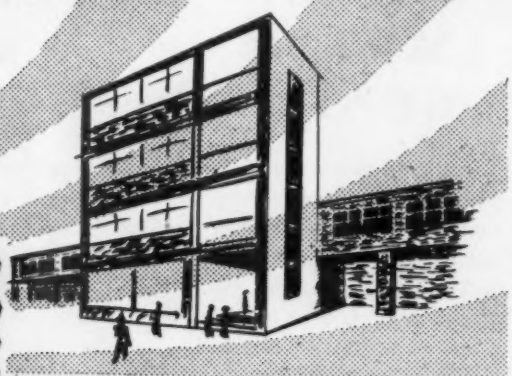

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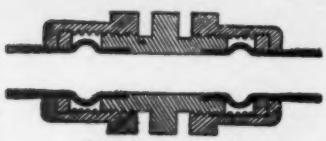

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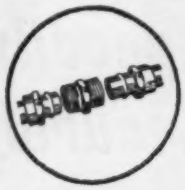

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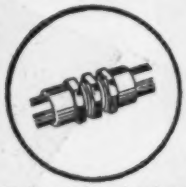

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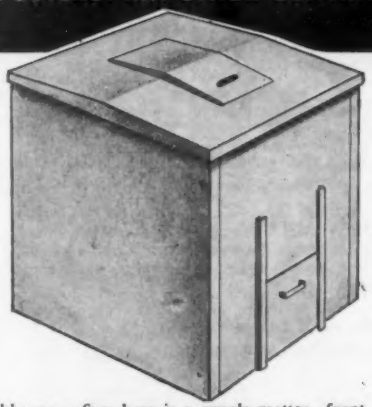

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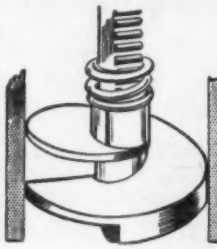

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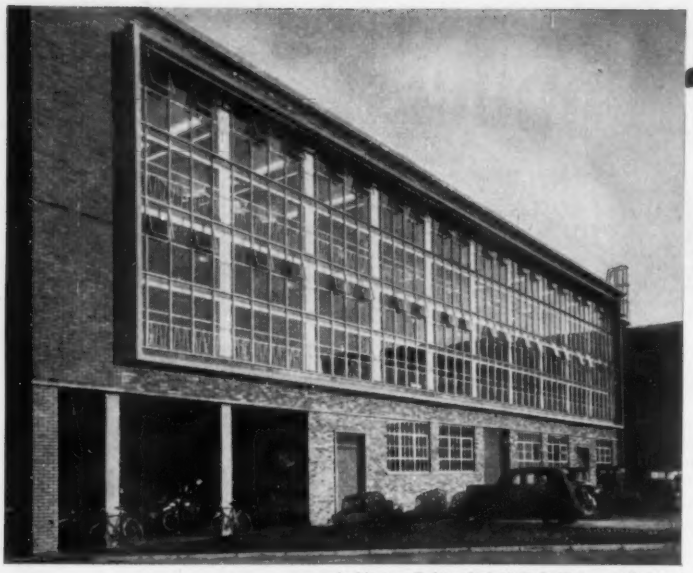

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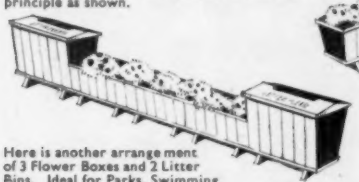

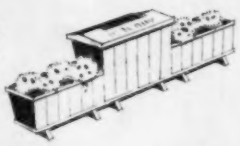

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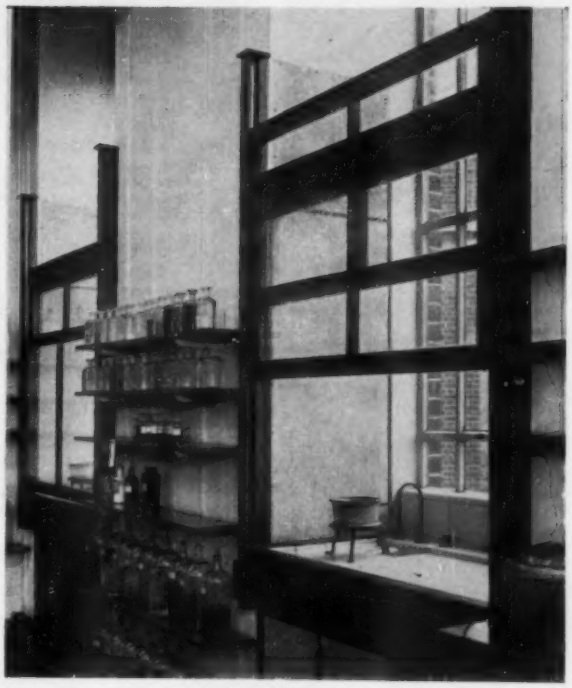

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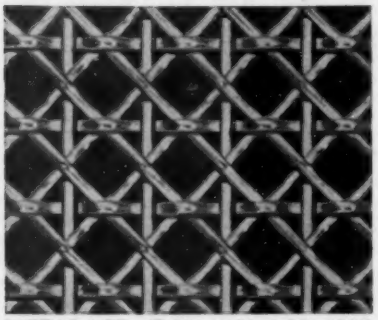

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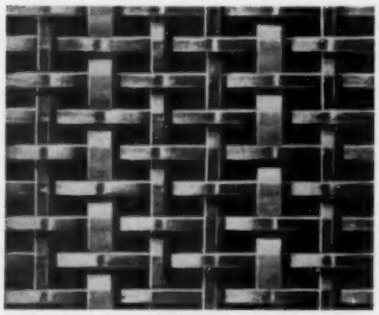

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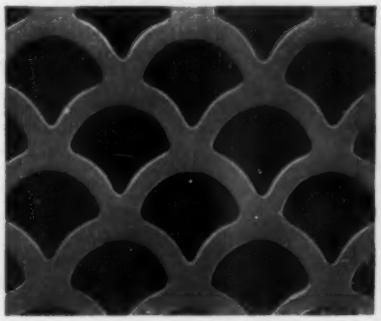

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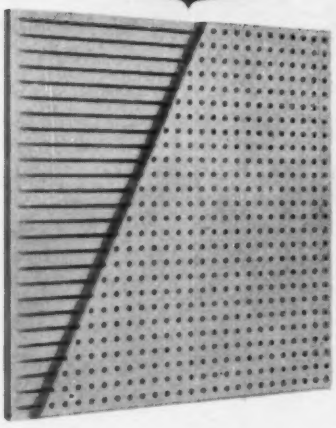

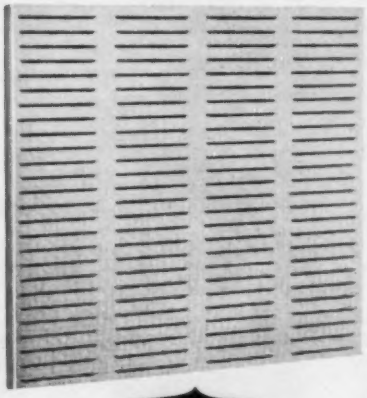

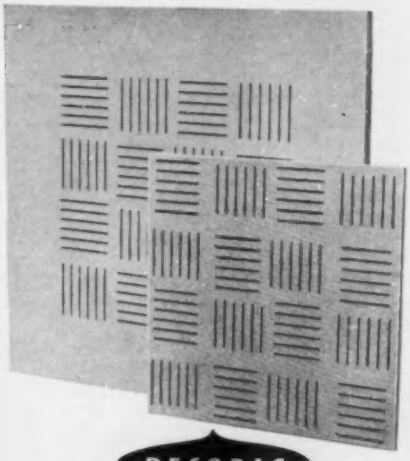

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APPOINTMENTS

BOROUGH OF ELLESMERE PORT

APPOINTMENT OF ARCHITECTURAL ASSISTANT

APPLICATIONS are invited from experienced men for the above appointment on the permanent salaried staff of the Borough Engineer and Surveyor. Applicants must have completed their professional training and have had a good general architectural experience, preferably in a Local Government Department, and preference will be given to those who have passed the preliminary examination of the R.I.B.A. The post is a superannuated post within Grade II—III (£595—£765 per annum) of the A.P.T. Division of the National Salary Scales. A weekly tenancy of a Council house will be offered to the successful candidate on appointment if he reasonably requires accommodation.

Applications, stating age, qualifications, experience and giving the names and addresses of two referees, must reach me by not later than Friday, the 31st August, 1956.

P. J. HODGES,
Town Clerk.

Municipal Offices,
Ellesmere Port,
Cheshire.
14th August, 1956. [2644

COUNTY BOROUGH OF MIDDLESBROUGH

APPLICATIONS are invited for the following appointments in the Borough Engineer and Surveyor's Department, involving the preparation and execution of schemes in a large constructional and development programme.

(a) Principal Assistant Architect, A.P.T. VI (£880—£1,080). Must be A.R.I.B.A. or similar qualification and have good experience in design and supervision.

(b) Senior Assistant Architect, A.P.T. V (£790—£970). Must be A.R.I.B.A. or similar qualification with good experience.

(c) Assistant Architects (4), Special Scale—A.P.T. IV (£690—£885). Should have passed final, or substantial parts, of R.I.B.A. or equivalent.

(d) Quantity Surveying Assistants (2), A.P.T. I-II (£530—£675). Practical experience in quantity surveying work following completion of recognized course of training.

(e) Chief Town Planning Assistant, A.P.T. V (£795—£970). Must be A.M.T.P.I. and have a recognised qualification in Engineering, Architecture or Surveying, and experience in Town Planning practice.

(f) Senior Assistant Building Surveyor, A.P.T. V (£795—£970). Must be A.R.I.C.S. or A.M.I. Mun.E. and have had good experience in design and erection of new buildings and maintenance, adaptation and supervision of property.

(g) Assistant Building Surveyor, Special Scale—A.P.T. IV £690—£885). Should have passed final, or substantial parts, of R.I.C.S. or Inst.Mun.E.

(h) Draughtsman, Misc. III-IV (£445—£575). Applicants must be competent draughtsmen.

All posts under N.J.C. Conditions and Superannuation Scheme. Starting salaries within the Grades will be determined according to qualifications and experience which need not necessarily have been gained in the Local Government Service.

All posts on Special Scale—A.P.T. IV are subject to automatic acceleration of increments amounting to £75 within the scales on attainment of corporate membership of the appropriate professional body, in addition to passing the final examination.

HOUSING ACCOMMODATION will be considered if the circumstances of the candidates and the post warrant.

Application forms from J. A. Kenyon, M.I.C.E., M.I.Mun.E., M.T.P.I., Borough Engineer and Surveyor, Municipal Buildings, to be returned, together with copies of two recent testimonials, by Tuesday, 11th September, 1956. [2651

COUNTY BOROUGH OF BLACKPOOL

APPLICATIONS (by September 12, 1956) are invited for the post of Architectural Assistant, A.P.T. II, £595-£675, in the Borough Surveyor's Department.

Application form and particulars from the Borough Surveyor (Arthur Hamilton, B.Sc.), P.O. Box No. 17, Municipal Buildings, Blackpool.

ERNEST C. LEE,
Town Clerk. [2663

APPOINTMENTS—contd.

URBAN DISTRICT COUNCIL OF CORBY

SENIOR ARCHITECTURAL ASSISTANT
GRADE A.P.T. IV (£710—£885)

APPLICATIONS are invited for the above appointment in the Architectural Section of the Engineer and Surveyor's Department.

Applicants must be Registered Architects and should have considerable experience in design, construction and contract administration as applied to contracts for Public Buildings and local authority housing.

The provisions of the Local Government Superannuation Acts, 1937/53 will apply to this appointment.

Housing accommodation will be made available to the successful candidate if married.

Forms of application may be obtained from the undersigned, to whom they should be returned not later than the first post on Friday the 14th September, 1956.

G. B. BLACKALL,
Clerk of the Council.

Council Offices,
Corby, Northants.
14th August, 1956. [2654

COUNTY BOROUGH OF ROCHDALE

ASSISTANT ARCHITECTS

APPLICATIONS are invited for the appointment of two assistant architects at a salary within the Special Grade £690—£840 per annum, commencing salary depending upon qualifications and experience.

One appointment will be in the housing architect's section, and one in the General Architect's Section.

Alternative applications will be considered from persons who are undertaking their professional training but have not yet fully qualified, at a salary within Grades I to III.

The appointment will be subject to the National Scheme of Conditions of Service, the Local Government Superannuation Acts, and to passing a medical examination.

Housing accommodation will be provided by the Council in apropropriate circumstances.

A Scheme for the payment of voluntary overtime is to be introduced.

Canvassing is prohibited and applicants must disclose whether they are related to any member or senior official of the Council.

Applications, stating age, qualifications, training and experience, together with the names and addresses of two persons to whom reference can be made, and endorsed "Assistant Architect," must be delivered to the Borough Surveyor, Town Hall, Rochdale, by the 11th September, 1956. [2653

LONDON COUNTY COUNCIL

ARCHITECT'S DEPARTMENT

VACANCIES exist for Architect/Planner (salaries up to £817). Tasks include three-dimensional planning within London's eight major Comprehensive Development Areas (including Stepney/Poplar, the South Bank, and Elephant and Castle) and other Redevelopment Areas.

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Particulars and application form, from Architect (AR./EK/ATP/2), County Hall, S.E.1. (907). [0006

COUNTY BOROUGH OF EAST HAM

BOROUGH ENGINEER'S DEPARTMENT

SENIOR ASSISTANT ARCHITECT
GRADE IV £710—£885

ARCHITECTURAL ASSISTANT
GRADE II £595—£675

LONDON Weighting is paid in addition. Salaries in excess of the minima may be paid according to qualifications and experience.

Subsistence allowances may be granted over a reasonable period to persons appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and application forms returnable by 7th September, 1956 from the Town Clerk, Town Hall, East Ham, E.6. [2659

APPOINTMENTS—contd.

COUNTY OF ESSEX

BOROUGH OF WALTHAMSTOW
COMMITTEE FOR EDUCATION

APPLICATIONS are invited for the appointment of Senior Assistant Architect in the Office of the Education Architect, Mr. T. L. Rampton, A.R.I.B.A., A.R.I.C.S.

Salary in accordance with A.P.T. Grade VI £880 to £1,080 per annum plus a London Weighting of £30 if 26 years of age or over. Permanent pensionable post.

Applicants must be Associate Members of the R.I.B.A. Experience in the design and construction of schools, in contract administration and control of staff an advantage.

Forms of application to be obtained from and returned to the undersigned within three weeks of the appearance of this notice.

E. T. POTTER,
Borough Education Officer.

Education Department,
Town Hall,
Forest Road,
Walthamstow, E.17.

SHEFFIELD REGIONAL HOSPITAL BOARD

APPLICATIONS are invited for the post of ARCHITECTURAL ASSISTANT. Candidates should have passed the Intermediate Examination of the R.I.B.A., or an examination recognized as equivalent. Salary scale is at present £480 x 20(7) x 25(2) —£670, and an increase of 6% is pending. The appointment is subject to the Whitley Council terms and conditions of service, to the National Health Service (Superannuation) Regulations, and to one month's notice on either side. Applications together with the names of three referees should be sent by the 8th September, 1956 to the Secretary to the Board, Fulwood House, Old Fulwood Road, Sheffield, 10. [2652

BOROUGH OF MAIDENHEAD

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

ARCHITECTURAL DRAUGHTSMAN

APPLICATIONS are invited for the appointment of an Architectural Draughtsman at a salary in accordance with Clerical Grade I of the National Scales (£520/£580).

Candidates must have had previous experience in an Architect's office and be fully capable of producing finished drawings from original sketches and must have a sufficient knowledge of Building Construction.

The appointment will be subject to:

(a) the National Scheme of Conditions of Service;
(b) the Local Government Superannuation Act, 1937;
(c) the satisfactory passing of a medical examination;
(d) termination by one month's notice on either side.

Applications, stating age, experience and previous appointments, accompanied by copies of two recent testimonials must be sent in an envelope endorsed "Architectural Draughtsman" to the Borough Engineer and Surveyor, 14 Craufurd Rise, Maidenhead, not later than September 6th, 1956.

Canvassing will be a disqualification and candidates must disclose whether to their knowledge they are related to any member or senior officer of the Council.

STANLEY PLATT,
Town Clerk.

Guildhall,
Maidenhead.
August, 1956. [2664

BOROUGH OF WORKINGTON

APPOINTMENT OF ARCHITECTURAL ASSISTANT

APPLICATIONS are invited for the appointment of an Architectural Assistant in the Borough Surveyor's Department, at a salary in accordance with A.P.T. Grade III (£640—£765).

Applications should be made on forms which can be obtained from the undersigned, and are to be sent in not later than September 10th, 1956.

Housing accommodation will be provided for the successful applicant, if required.

RUSSELL C. PHARAOH,
Town Clerk.

Town Hall,
Workington.
August, 1956. [2665

APPOINTMENTS—contd.

SURREY COUNTY COUNCIL

EDUCATION DEPARTMENT
KINGSTON SCHOOL OF ART

APPLICATIONS are invited for the following appointments in the Department of Architecture to commence with the new session 1956:
1 Part-time Studio Instructor to instruct in the basic principles of general design, and also to assist with the supervision of the general architectural studies of the First Year students.
2 Part-time Instructor in Structural Mechanics (Intermediate Stage) for one seven-hour day weekly.
3 Part-time Instructor in Acoustic Design and Sound Control for one seven-hour day weekly.

Applicants should be well qualified professionally, have had varied practical experience and be actively engaged in their profession. Previous teaching experience will be an additional qualification.

Salary for these appointments will be in accordance with the rates approved by the Education Committee. The appointment of the Studio Instructor will be up to a maximum of three seven-hour days weekly.

Application form and further particulars including details of part-time rates of salary may be obtained upon receipt of a stamped addressed envelope, from the Registrar, Kingston School of Art, Knight's Park, Kingston on Thames, Surrey. [2658

TENDERS

COUNTY BOROUGH OF BRIGHTON

EDUCATION COMMITTEE

TENDERS are invited for:
Adaptations at Queens Park Secondary School. Bills of Quantities and forms of tender may be obtained from the Borough Surveyor, Engineer & Planning Officer, 26-30 Kings Road, Brighton on or after September 3rd, 1956 on receipt of a returnable deposit of £1 1s.

Tenders are to be delivered to the **Town Clerk, Brighton** not later than Wednesday, September 19th, 1956.

W. G. STONE,
Director of Education.
[2667

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UNIVERSITY OF MANCHESTER

THE NEXT SESSION COMMENCES
ON
THURSDAY, 4th OCTOBER, 1956 [2650

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(Principal: A. B. Waters, F.R.I.B.A.) 103D, Old Brompton Road, London, S.W.7 (KEN 4477), and at Worcester. [0789

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SCHERRER & HICKS, 19 Cavendish Square, W.1. (Tel. Museum 1105), require immediately several Architectural Assistants of Intermediate standard. The work is varied and covers Research Laboratories, Offices, Housing and Schools. Five day week. Salary by arrangement. [2623

ARCHITECTURAL Assistants and Junior Architectural Assistants required by Hackney Borough Council for extensive programme of new housing, public baths, libraries and other public buildings. Appointments may be in grade A.P.T. I (£530—£610), A.P.T. II (£595—£675) or A.P.T. III (£640—£765) p.a., singly or combined, plus London Weighting allowance of up to £30 p.a. Candidates must be Probationers or Students of R.I.B.A. Grade and commencing salary according to training, qualifications and experience.

Application form obtainable from the Town Clerk, Town Hall, E.8, returnable by 29th August, 1956, quoting reference H.2. [2636

ARCHITECTURAL DRAUGHTSMEN for Industrial Building and/or Staff housing. Good salary, pension scheme. Apply stating age, qualifications and experience, Staff Personnel Manager, Ashmore Benson, Pease & Co., Stockton-on-Tees. [2642

LARGE London practice requires young qualified Architect to specialize in detail design of new office buildings. Write to Box No. 3698, c/o A. & B. N. [2649

ASSISTANT Architect required by Hackney Borough Council for extensive programme of new housing, public baths, libraries and other public buildings. Salary in accordance with either Grades A.P.T. V-VI (£795-£1,080 p.a.) or VI-VII (£880-£1,200 p.a.), according to experience, plus London Weighting allowance. Application form obtainable from the Town Clerk, Town Hall, Hackney, E.8, returnable by August 29th, 1956. [2661

ARCHITECTURAL Assistant required. Private office with long-term programme of schools, churches and domestic projects. Salary within the range £700-£850 according to qualifications and experience.—W. C. Mangan, 2 Ribblesdale Place, Preston, Lancs. [2662

ARCHITECTS' Co-partnership require Assistant for working drawings and detailed design. Salary according to experience. Office doing work in U.K. and West Africa. Write, 44 Charlotte Street, London, W.1, or telephone Langham 5971. [0002

ASSISTANT (R.I.B.A. Intermediate Standard) required by Estate Department of a Brewery Company. Apply, stating age, experience and salary required to Rd. Whitaker & Sons Ltd., The Brewery, Halifax, Yorkshire. [2666

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BOOKS

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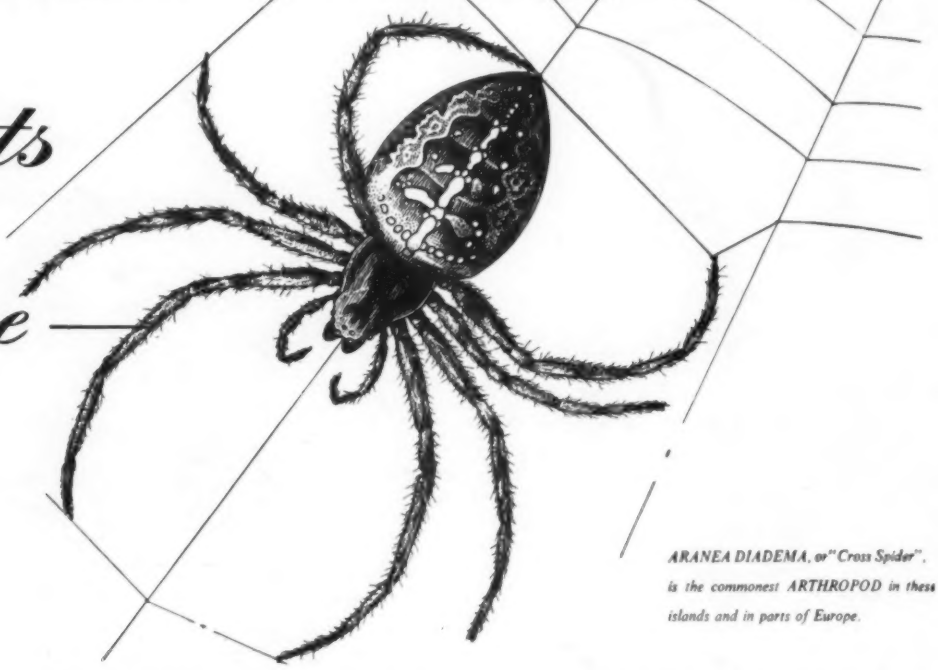

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